Knitted Outerwear Times

the official publication of the
national knitted outerwear association
386 park avenue south, new york 16, new york
murray hill 3-7520

sweaters • swim suits • infantswear • knit fabrics • polo shirts • gloves • headwear

INST. OF TEXTILE TECHNOLOGY
SEP 2 6 1960
LIBRARY
CHARLOTTESVILLE, VA.

Published weekly (except for a special issue in April in New York, N. Y. Subscription price $10 per year. Entered as Second Class Matter June 27, 1947, at the Post Office at New York, N. Y. under the Act of March 3, 1879. Copyright 1960 by the National Knitted Outerwear Association.

Vol. 29 MONDAY, SEPTEMBER 26, 1960 No. 39

Trade Promotions

15th Sweater Week Observed On Broad Retail Front

Crown N. Y. Girl Sweater Queen

A blue-eyed blonde New Yorker, Eileen Herlihy, 22, was voted 1960 Sweater Queen at the Waldorf Monday in the opening ceremonies of the 15th annual National Sweater Week. Miss Herlihy — 5′ 7″-34-23-34 —was the choice of newsmen and industry executives. The runner up was Lou-Anne Lee, 21, of Tennessee.

In a special preliminary event, Kathy Cody, 5½, of New York City, was selected Miss Sweater Girl of 1975.

National Sweater week, which concluded Sunday, was sponsored by the Knitted Outerwear Foundation, promotional affiliate of the National Knitted Outerwear Association.

The winners were crowned by a Sweater Guy, Dick Bartley, an actor from the Broadway musical "West Side Story."

Miss Herlihy was chosen from twelve contestants, finalists in contests involving 200 girls from all over the U.S. and West Europe. Each of the twelve wore black pumps, black skirts and white sweaters, Helen Harpers supplied by Blume Knitwear.

The four finalists in the Miss Sweater Girl 1975 contest wore white sweaters supplied by Knitown Togs Corp. Peggy Peeters, a prizewinner in a previous Sweater Queen competition, was the commentator.

Retailers and advertisers tied in the Week to promotions and made extensive use of some 7,000 NKOA kits.

1960 Sweater Queen finalists line up (top) with the winner, Eileen Herlihy, 22, of New York City, and Kathy Cody, 5½, of New York City, elected Miss Sweater Queen 1975. At their feet is Dick Bartley, Broadway actor and Sweater Guy. Center standing are, left to right, Edward A. Brandwein, administrative secretary of the National Knitted Outerwear Association, sponsors of the competition; Sidney S. Korzenik, NKOA executive director and counsel, and Ben Kaplan, president of Mayflower Knitting Mills. (Below left), Miss Herlihy, the Sweater Queen and, right, Sweater Guy Dick Bartley, crowns the 1975 Sweater Queen.

Labor Relations

TWUA, Knit Dyers Sign 2-Year Accord

The Knit Goods Dyers & Processors Association and the Textile Workers Union of America, A.F.L.-C.I.O. have concluded an agreement covering New York City employers of piece dyers and sweater washers.

The agreement, which runs to July 31, 1962, provides for wage increases and fringe benefits, including welfare, holidays, vacations, life insurance and bondolence pay. The TWUA estimates the package increase at 10 cents per hour.

The agreement, the first signed with the Association, is retroactive to August 1, and has a wage reopener on December 1, 1961.

Controversies under the agreement will be submitted to Dr. Herman A. Gray, who has been appointed impartial chairman.

ADDING A NEW DIMENSION TO SWEATER FASHION

Now that sweaters are taking off in all fashion directions, Orlon Sayelle is particularly welcomed.

This superb yarn, first promoted by National under the trademark of Vybran, offers tremendous scope to the designer.

With the look and touch of fine wool, its ease in handling is assured. And it allows a wide variety of delicate details, since Orlon Sayelle has all the easy-washing, quick-drying advantages of Orlon.

For new horizons in sweater fashion, we definitely recommend you look into the possibilities of Orlon Sayelle.

"QUALITY-AT NO EXTRA COST"

National Spinning Co., Inc.
350 FIFTH AVE., NEW YORK 1 LOngacre 5-0360

National Yarn Corp.
2735 PROSPECT AVE., CLEVELAND, OHIO
MILLS Jamestown, N. Y.; Washington, N. C., Whiteville, N. C

*Du Pont T. M.

SPINNERS OF WORSTED · ZEPHYR · MOHLAN · NYLON · TURBO ORLON · SPUN-GEE · BAN-LON · YAMA · NATURA · VYBRAN

Knitted Outerwear Times

Published by National Knitted Outerwear Association, 386 Park Avenue South, New York 16, N. Y. MUrray Hill 3-7520. Subscription Price (including the Yearbook Edition)—$10 per year in U. S. A. $15 per year in Canada and foreign countries.

The Knitted Outerwear Times being the official publication of the National Knitted Outerwear Association, is exclusively devoted to the dissemination of information, the exchange of opinion, the stimulation of trade, and the general improvement of the knitted outerwear industry in accordance with the Association's basic objectives as expressed in the preamble of its by-laws.

James F. Nields, President
Vice-Presidents:
Ingram Bergman
Israel Cohen
David Reinthal
Ed Kalfahs
Irving Louis
John Miller
Irving Saltzman, Treasurer

Sidney S. Korzenik
Executive Director and Counsel
National Knitted Outerwear Ass'n
Harold Korzenik, Counsel
Edward A. Brandwein, Admin. Sec.

Harold Linsky, Secretary
New England District
Edward B. Shils, Secretary
H. H. Cohen, Counsel
Pennsylvania District
H. L. Ashworth, Secretary
Western District
Edward A. Brandwein, Secretary
Eastern District
Cleveland District
Cleveland, Ohio

Charles Reichman.....Editor
Irving I. Silverman...Business Mgr.

FEATURES IN THIS ISSUE

Taslan Textured Spun Yarns of Creslan.. 3

Tailor-Made Orlon Acrylic Fibers for Knitwear 5

History and Development of Warp Knitting Industry 9

Swimwear 19-23

Knitted Dresses ...15-17

Synthetic Fibers and Yarns

Taslan Textured Spun Yarns Of Creslan

By CHARLES REICHMAN, Editor

INABILITY to produce an acrylic fiber either in tow or high and regular shrinkage staple can be a serious handicap to marketing of the fiber in the knitted outerwear field, for it means that the synthetic cannot be processed into a high-bulk knitting yarn. Of the four acrylic fibers now on the market—Acrilan, Creslan, Orlon and Zefran—only the first and third presently can be spun into high-bulk yarn by converting tow on the Turbo stapler or by blending producer's high and low shrinkage staple on cotton system equipment.

Development of Creslan and Zefran in tow form has top priority in the research programs of the producers of these two fibers. At the moment, American Cyanamid Co., the manufacturer of Creslan, appears to be leading in the race with Dow Chemical Co., the producers of Zefran, as to which will be first on the market with a commercially acceptable tow product. However, pending the perfection of Creslan tow, Cyanamid has hit upon a technique for temporarily clearing the high-bulk yarn hurdle. The company is overcoming inability to process its acrylic fiber into high-bulk yarn via the conventional procedures by post-treating spun yarns of regular shrinkage Creslan on Taslan texturizing equipment.

Method Described

The Taslan process, a development of the DuPont Company, is a method of modifying either filament or spun yarn by a loop forming operation. Under this system the yarn is passed over an air pressure vent or nozzle which disturbs the yarn bundle, creating a series of random-sized and random-placed loops on the surface of the yarn.

On spun yarns of Creslan this operation achieves an increase in the effective diameter of the yarn comparable to that presently obtained with competing acrylic fibers via the Turbo stapler or high-bulk cotton system routes.

Although the Taslan-treated Creslan spun yarns are not equal in bulk to conventionally produced high-bulk Orlon or Acrilan yarns, the Cyanamid yarns, nevertheless, rate higher in this respect than the non-textured spun yarns of Creslan. In terms of cover, however, the Taslanized Creslan yarns are claimed to be superior to Orlon or or Acrilan high-bulk yarns. The surface cover produced by post-processing the Creslan spun yarn on Taslan equipment is said to be maintained through normal wear and washing.

Varied Deniers

In the production of the mock high-bulk Creslan yarns, spinners have their choice of semi-dull or bright Creslan in the five different deniers and in staple lengths suitable for all worsted spinning systems. The staple is first converted to top and then constructed into the desired type of spun yarn. The latter is then put through Taslan equipment following which it is put up on dye tubes to be package dyed. However, if the yarn is put up in skeins following twisting and plying, dyeing would precede the texturizing operation.

Cyanamid's technique of imparting bulk to worsted yarns of Creslan via the Taslan texturizing system is not the first time that this procedure has been used for enhancing the bulk and coverage of a spun yarn. The method recalls the work done about two years ago by Ramseur Worsted Mills in developing a Taslan-textured high-bulk Orlon worsted yarn, called Ramspun 77. This yarn was produced in the normal fashion for Turbo-processed Orlon yarn, but after the high-bulk yarn was created it was then put through the Taslan process. Ramseur sold the yarn at the time either with a residual shrinkage of 20 percent for knitting via customary high-bulk procedures or fully relaxed for knitting to size. Taslan-textured spun yarns of Creslan require no relaxation after knitting into sweater bodies; the yarns are knit to size.

The Taslanized spun yarns of Creslan are one of a group of new yarn constructions on which the American Cyanamid Company is staking its stepped-up program for broader penetration of the knitwear trade with its acrylic fiber. Among the new dimensions in which Creslan is being made available to jersey and yardgoods knitters are:

- 100 percent Creslan yarns embodying the luminescent look achieved by use of bright luster Creslan staple.
- Creslan/wool yarns of 75 percent, 25 percent content, respectively, for knitting into plain and "double jersey" (rib) fabrics.
- Creslan/nylon blend yarns.

The latter are available in two different forms—in a pebble crepe effect and in a chenille look. Both are fancy twist yarns, the nylon component of each being a textured filament.

In addition to the sweater and knitted dressgoods areas, Creslan is also expanding into the swimwear fabrics field. One construction in this end-use consists of equal mixtures of Creslan and Helanca-processed nylon filament; another is of 89 percent Creslan and 11 percent cotton-covered lastex.

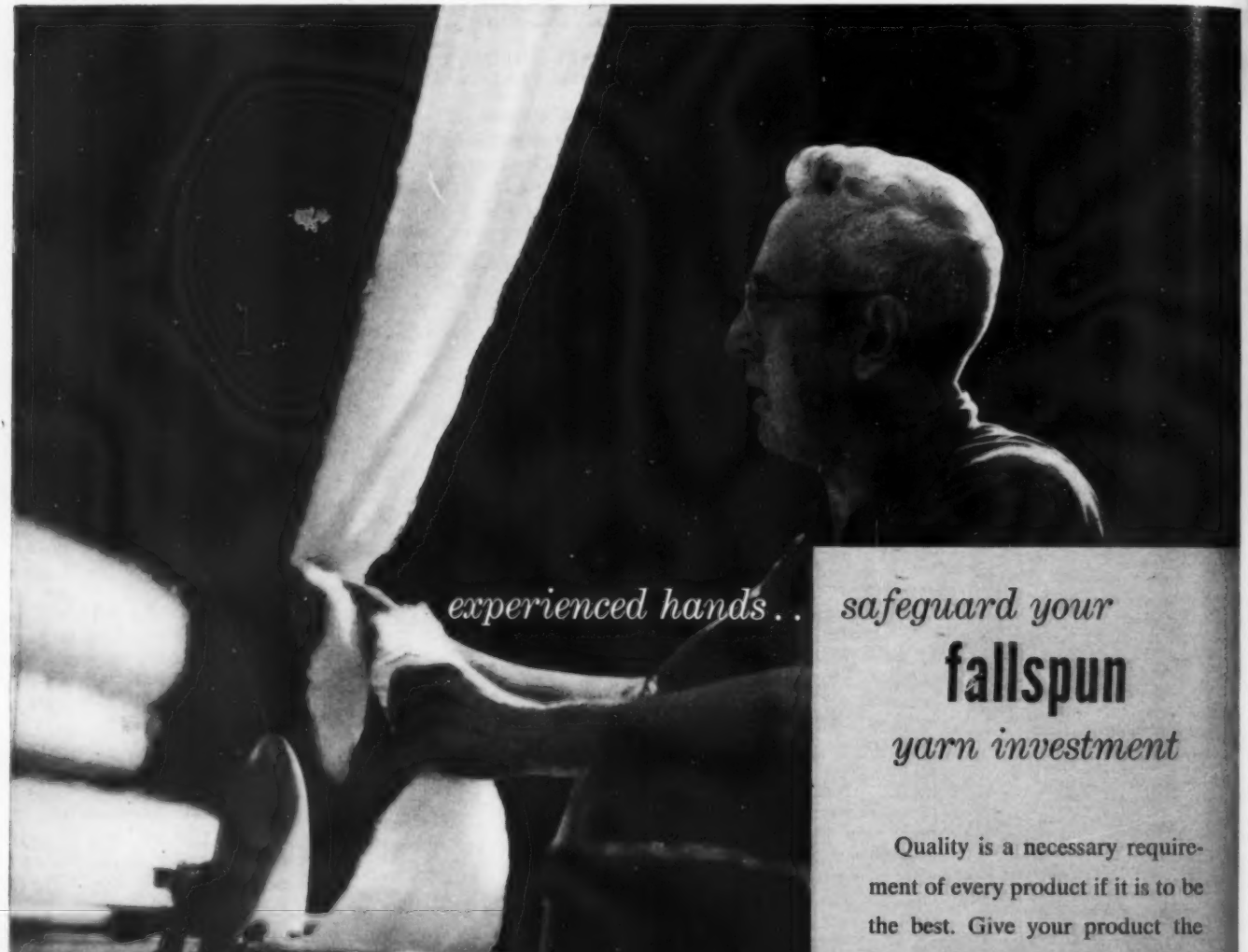
FACTS ABOUT CRESLAN

PRODUCER—American Cyanamid Company, which manufactures Creslan at a plant near Pensacola, Fla.

PROPERTIES—Creslan has a round cross section, a specific gravity of 1.17, tenacity of 3.0 at 3.5 grams per denier and moisture regain of 1.4 percent.

DENIERS—The fiber is produced in staple form, semi-dull and bright, in 2, 3, 5 and 15 deniers.

STAPLE LENGTHS — Staple comes in 1½ to 4½ inches in length, suitable for all spinning systems.



safeguard your

fallspun

yarn investment

Quality is a necessary requirement of every product if it is to be the best. Give your product the protection of Fallspun seasoned skills and yarn manufacture. Since 1904 we have specialized in giving utmost value in woolen system yarns made from all fibers and blends of fibers. Call us directly at the mill or through any one of the following selling agents for prompt service.

Fallspun QUALITY YARNS
FALLS YARN MILLS Woonsocket, R. I.

FALLS YARN MILLS, INC.
Established 1904
WOONSOCKET, RHODE ISLAND • POplar 9-9980

SELLING AGENTS

Stanley Porter, New York City • Pfizenmaier & Kirkland Co., Boston, Mass. • W. J. Miller, Philadelphia, Penna.
C. L. Miller & Sons, Utica, N. Y. • Anthony, Cheatham & James Yarns, Inc., Burlington, N. C. • D. F. Swain Co., Chicago, Ill.

Canadian Textile Seminar

Tailor-Made Orlon Acrylic Fibers For Knitwear

By M. Q. WEBB
Technical Divisions, Textile Fibers Department
E. I. Du Pont de Nemours & Co., Inc.

ORLON acrylic fiber in garment form offers to the consumer a combination of pleasing aesthetics and good end-use performance. Fabrics made from Orlon fiber are characterized by luxurious handle, high bulk, and ease-of-care. Such fabrics have exceptionally good appearance during use because of the whiteness of the base fiber and because this product can be dyed, so that bright, fast colors are obtained. Good surface texture retention during wear, satisfactory wrinkling performance, and good wear durability, along with the aesthetics of fabrics made from Orlon fiber, combine to form the basis for its commercial acceptance.

Technical effort on Orlon acrylic fiber has been aimed at building the proper characteristics into this product which will fit it into several specific end-use areas. This research has resulted in the generation of several families of Orlon fibers so that Orlon can now be used not only in sweaters, but in blankets and rugs, in cotton-type fabrics, and in luxury garments traditionally made from silk or fine expensive wools. The research presented here deals with the tailor-making of these families of Orlon fibers so that their properties fit them into the various specific uses. The work reported here is that of several du Pont research laboratories working closely with our Marketing Division. The laboratories involved include the Textile Research Laboratory at Wilmington, Del., the Benger Laboratory at Waynesboro, Va., and the May Plant Technical Laboratory at Camden, S.C.

In the early work on Orlon acrylic staple, the question was asked, "Based on the properties of this new staple, where should it be used?" This approach resulted in the penetration of the product into a few end - use areas, but we soon found that the fiber had to be modified in many ways before it became a commercially acceptable textile product of diversified uses.

We now believe that we must tailor-make our fiber for a given end-use. The polyacrylonitrile base is adaptable and we have learned how to change the properties of this polymer in fiber form as required for a given end use.

There are today, four basic families of Orlon fibers. These are:

- Standard type Orlon fiber —Orlon T-42 staple.
- Blend type Orlon fibers— Orlon T-37; T-39 staples.
- Cotton system type Orlon fibers — Orlon T-25; T-72 staples.
- Luxury type Orlon fibers —Orlon Cantrece; Orlon Sayelle; and Orlon T-28 staple.

STANDARD TYPE ORLON FIBER FAMILY— Each of these families of fibers serves specific kinds of end-uses. The standard type Orlon staple is an excellent base from which to make knitwear products. By use of T-42 Orlon staple an aesthetically pleasing, bright appearing sweater of relatively low cost, with good wash-wear characteristics, can be made. Today in the United States, almost every schoolgirl has a complete line of sweater-blouses in her wardrobe. By use of Orlon tow, similar sweaters, which have a luxury touch because of the relatively high bulk, are readily obtainable. A new technical information publication, published by the Technical Service Section of the du Pont Company, entitled "Processing 'Orlon' Acrylic Tow on the Turbo Stapler and Related Equipment" (Ref. 1) which contains manufacturing details for making such products, is available upon request. In addition to sweaters, this same product offers to the men's sock manufacturer opportunities for high style diversification with similar aesthetic and functional advantages as found for sweaters.

The key built-in or tailor-made properties of T-42 Orlon which have made this product an outstanding fiber for these knitwear uses are those which permit the manufacture of high-bulk yarns. There are two properties which contribute most here:

1. Low density of 1.18 for Orlon compared to 1.31 for wool and 1.52 for cotton.

2. The potential shrinkage of the fiber after hot stretching. By blending low density, high shrinkage Orlon staple with low density, low shrinkage Orlon staple, a high-bulk yarn is made (for details see Ref. 2) This product is used to obtain bulky knitwear with a pleasing, luxurious handle.

BLEND TYPE ORLON FIBERS — The second family is the blend type fibers. Several kinds of Orlon staple are available for this use. For example in carpets, Orlon T-37 staple provides outstanding crush resistance, high bulk, and good cleanability and gives the rug manufacturer new styling possibilities. One may observe the outstanding aesthetics and styling which can be obtained from this product by inspection of the various commercially available carpets containing Orlon T-37 staple.

Orlon T-39 staple is a product specifically designed for woolen system processing. It, like wool, is a blend of fiber deniers and lengths and is commercially available with different average dpf ranges. This product has been tailored to produce specific knds of blankets. For example, soft baby blankets can be made from Type 39A with a low average dpf of 2.4, while crisp wool-like blankets are made from Orlon Type 39B staple with an average dpf of 6.5. Thus, blanket handle can be varied as required for the desired end-use. In addition, the variable cut length staple such as is used in the T-39 series, compared to equal cut lengths as in T-42 staple, results in reduced shedding of blankets. Thus, by adjustment of fiber characteristics for a given end-use, performance improvements have been obtained.

The key characteristics, in addition to the normal functional and aesthetic properties of Orlon, which allow these products to be useful in these end uses are:

1. Proper denier — high in T-37 for rugs; medium, as in T-39B for wool-like blankets; low, as in T-39A for soft baby blankets.

2. Denier and length blends for woolen system processing.

COTTON SYSTEM TYPE ORLON FIBERS — There are now two members of the cotton processing system type family of Orlon fibers. The first one is Orlon T-25 staple which was designed for both the cotton and American spinning systems and can also be used for blending with cotton or rayon. This product is used in suits and slacks, in broadcloth and poplin dresswear, in work clothing, and in sport shirts. Orlon T-25 staple has very low fiber shrinkage (0-2 percent) and a balanced denier and cut length combination to provide satisfactory cotton system processing.

The newest cotton system type fiber, just recently announced, is T-72. This product is expected to find use in next-to-skin wear such as knit T-shirts, knit shorts, and sport shirts. There are two important characterisctics of this product. The first is next-to-skin comfort. It is cool in summer and warm in winter. Secondly, it has the whiteness and brightness of bleached and brightened cotton and has excellent whiteness retention during use.

Why is Orlon T-72 fiber comfortable under winter conditions? Under such conditions, relative humidity is low and little perspiration is present to be picked up by the next-to-skin fabric and ultimately transmitted through the layers of outer clothing. Under these conditions, because of the inherently bulky nature of garments made from Orlon, considerable air is entrapped and the fabric acts as an insulator, so the body

(*Continued on Page* 7)

Text of talk delivered at Seventh Canadian Textile Seminar held September 7 and 8 at Queen's University, Kingston, Ontario.

IT'S NEW!
IT'S NYLON!
ITS NAME...
ANTRON
TRADEMARK

A new nylon from Du Pont... new lustre, new life, new luxury... new profit opportunities for *you!* That's "Antron"*! Imagine, sweater shirts with an exciting hint of lustre and a light, luxurious hand. Knits that stay neat, keep their size and shape. All this, and automatic wash 'n' wear, too!... Du Pont will be telling millions of customers about "Antron" in full-color ads in: • The New York Times Magazine • Sports Illustrated • The New Yorker • Sunday supplements in major selling areas...The name, once again: "Antron". Remember it. Sell with it. *Profit* with it.

DU PONT
REG. U.S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING... *THROUGH CHEMISTRY*

*Du Pont's trademark for its trilobal multifilament nylon yarn.

Enjoy THE DU PONT SHOW WITH JUNE ALLYSON, Thursday nights on CBS-TV.

MEMBER AIMSW.

temperature is maintained.

On the other hand, during warm weather, when only a few layers of light clothing are used, it also is comfortable. Under such conditions the body perspires; consequently, considerable moisture must be conducted from the skin. When this moisture is allowed to evaporate quickly, the body is cooled. It turns out, because of the surface properties of Orlon, that it wets rapidly; as quickly, as a matter of fact, as does cotton. A large amount of water can be picked up by this fiber (25 gr. fiber will hold 100 gr. water).

In contrast to cotton, Orlon has a relatively low moisture regain and water does not saturate the interstices of the fiber and feel clammy. Because of the large surface area available for the transport of moisture from the skin by the low dpf Orlon fibers, moisture is quickly conducted away from the skin and is rapidly evaporated because of the thin film of water spread out over the large surface area of these fibers. Since lightweight clothing is worn, the water evaporates relatively quickly and the skin is cooled. Physiological tests under warm weather controlled temperatures and humidities have shown the importance of denier per filament of the Orlon fibers to comfort. Such comparative tests with cotton T-shirts and woven fabrics have shown that the Orlon T-72 is more comfortable than cotton and distinctly superior to 3 dpf Orlon T-42 in this respect. Thus, the T-72 fiber, because of its bulk and insulating properties, provides wear comfort in the winter and, because of its water wicking action with the proper denier is comfortable under warm-moist conditions.

Another feature of this fiber is its whiteness and brightness. When used unblended it need not be bleached. It inherently has the good whiteness and brightness of bleached and brightened cotton. Consequently, Orlon T-72 staple does not need the chlorite type bleach which is used on Orlon T-42 staple. When blended with cotton, the cotton must be bleached, so cotton bleaching procedures have been worked out for these blends. This new product has excellent whiteness retention during use. Based on laboratory tests, its good whiteness and brightness is retained even after twenty launderings.

The key properties of the cotton system type fibers are selected deniers for next-to-skin and outerwear uses, along with good water wicking action, as well as durable whiteness and brightness for Orlon T-72 staple.

LUXURY TYPE ORLON FIBERS —The fourth family of Orlon fibers is the luxury type. Orlon Cantrece continuous filament fiber can be used to make luxury type garments. This product has been used to make knitted garments which are silk-like in appearance and is being used in styled sweaters and dresses. The characteristic which makes this product useful in markets not served by other Orlon fibers is its availability in long continuous lengths so that clean-look, non-fuzzy garments can be made.

One of the newest Orlon luxury fibers is Orlon Sayelle bicomponent acrylic fiber, the fiber with wool-like crimp characteristics. The behavior of wool has long been recognized as unique and outstanding among natural fibers. Wool exhibits a very high spiral, permanent kind of crimp, which is important to its tactile properties. In addition, it exhibits unique behavior in its response to finishing and wet-processing. One of the basic causes for this lies in the crimp characteristics of wool. This permanent, spiral crimp changes depending upon its environment. For example, the crimp decreases when the fiber is wet and then increases to the original level upon drying. This has been termed crimp reversibility. Wool also has a high degree of bulk, resulting from its three-dimensional crimp structure. These properties of crimp—reversibility of crimp in wet and dry processing, and permanent spiral crimp — have long been aimed for in manmade fibers.

Horio and Kondo (Ref. 3) showed a difference in dye receptivity for the two sides of the wool fiber. This differential dyeing of wool was correlated with its coiling and crimping nature and showed that wool possessed a bilateral structure.

As a result of research work carried out over the past few years, it has been possible to develop bilateral structure with reversible crimp in an acrylic fiber. A commercial version of the fiber was announced by du Pont last fall and the properties of the new acrylic fiber was discussed at the Textile Research Institute meeting in March 1960 (Ref. 4). The components of this new acrylic fiber involve unique chemical modification of acrylonitrile polymer to achieve differential properties across the fibers. In appearance, the fiber differs significantly in cross-section from conventional Orlon acrylic staple. The cross-section is rather acorn-shaped and when stained shows a bilateral structure as does wool. In longitudinal appearance as the fiber is produced, there is a mild, mechanical crimp as well as some three - dimensional crimp which is fully adequate for textile processing. Orlon Sayelle does not differ significantly from the standard Orlon T-42 staple in the usual physical properties; hence, it has similar physical performance characteristics.

This bicomponent acrylic fiber produces a three-dimensional crimp on heat-treatment and a reversible crimp upon wetting and drying. What effect does this have on fabrics? One of the most apparent results is an aesthetic one. The hand is very wool-like, exhibiting more bite and compressional resilience than is noted with conventional acrylic fibers. This wool-like character is quite evident in sweaters and suitings prepared from this fiber.

The second important characteristic imparted by this fiber is fabric elasticity. As can be seen from the stress-strain hysteresis behavior, there is a degree of elasticity imparted by the character of the crimp which is quite unusual in synthetics but which has heretofore been an attribute monopolized by wool. This can be seen in a practical way in a hand-knitting yarn where elasticity is of vital importance. Another practical demonstration is in sweater bands, where elasticity is essential to performance.

A third characteristic imparted to fabrics by this type of fiber is loft or bulk in combination with lightness. It is possible to get high bulk without coring in the cross section of the fiber bundle. It is not necessary, then, to use two kinds of fiber, high and low shrinkage, as discussed earlier under Orlon T-42 staple, to get high bulk. Comparison in knit structures, such as sweaters, shows the nature of the loft which can be obtained with a bilateral fiber in contrast to a conventional monofiber.

Another important benefit in fabric form of the two-component fiber is reduced glazing during tailoring or dry cleaning. The two-component fiber has less tendency to compact under heat and pressure, and recovery from hot compacting is rapid when steam is applied to cause the two components of the fiber to swell to different extents.

(*Continued on Page* 38)

TABLE I
FAMILIES OF ORLON ACRYLIC FIBERS

	Key End Uses	Key Properties
Standard Type Orlon (T-42)	Sweaters Knit goods	Low density, potential shrinkage.
Blend Type Orlon (T-37, T-39)	Carpets Blankets Woolen-spun fabrics	Selected high denier, denier blends. cut length blends.
Cotton System Type Orlon	Next-to-skin uses (Underwear, sportswear) Cellulosic fabrics	Selected low deniers, water wicking action, durable whiteness and brightness.
Luxury Type Orlon (Orlon Cantrece	Silk-like knits Wool-like sweaters	Continuous fibers, permanent, reversible spiral crimp,
Orlon Sayelle T-28)	Worsted fabrics	durable surface slickness.

A&E *has your knitting, weaving and finishing problems well in hand*

ADD MORE FASHION TO YOUR FABRICS WITH A&E'S STETTO FINISH FOR SYNTHETIC KNITS

A&E Stetto is the perfect finishing touch for circular knit fabrics of both synthetic and blend yarns. It provides dimensional stability, improves wash 'n' wear quality, preserves a fine soft hand. Ask your A&E man about Stetto, today.

The dress above which adds up to so much fashion is by Parklane Jr. in one of Fabricland's "English Concept" knits. It's a lovely blend of 80% Acrilan acrylic and 20% wool finished with A&E Stetto.

A&E Finishing Division American & Efird Mills, Inc. Mount Holly, N. C.

"Custom Service to the Knitting and Weaving Trades"

New York Sales Office: 350 Fifth Avenue · OX 5-3977

Also: Amsterdam • Atlanta • Boston • Chattanooga • Chicago • Cleveland • Dallas • Detroit • Jenkintown • Kansas City Los Angeles • Nashville • Philadelphia • Providence • Reading • St. Louis • Havana

Combed • Carded • Durene® Mercerized • Dyed Yarns • Worsted • Orlon • Outerwear Blends • Textralized Yarn for Ban-Lon Garments • Industrial Sewing Thread • Circular Knit Finishing

Canadian Textile Seminar

History And Development Of Warp Knitting Industry

By ROBERT PEEL
Vice-President, Research Fidelity Machine Company, Inc.

THE warp knitting industry has its origin mainly in England and has always been closely associated with the Midlands, particularly Derby and Nottingham although Leicester contributed some distinguished inventors.

For instance, it is not generally appreciated how valuable was the contribution made by William Dawson of Leicester after whom the pattern wheels, as we know them, are named. In 1791 (patent 1820) he invented a warp machine for making hosiery which was also specially adopted for making military sashes of crimson silk. He also made laces on the same machine and invented a machine for tagging them, cutting the tin, and closing it in one operation. From Felkins' account we find his patrons allowed him £2.20 a week, but because the work took longer than they thought it should they withdrew their support. This pattern wheel was invented ten years before Jacquard invented his mechanism. Failing to get his patent renewed the unfortunate genius committed suicide.

It seems that Felkins' account of the invention of the warp knitting machine is a reliable one. He credits Crane with making the first machine in 1775. It was a single bar machine to make blue and white zig zag striped silk hosiery. The term applied to these Vandyke warps arose from their similarity to the pointed angular ruffs in the pictures of the celebrated painter. However Felkin does say Tarratt of Nottingham may have invented the warp knitting machine, but there is no proof of this. This whole section of Felkins' book is well worth study. (Chapter X pages 143-155).

It is a comparatively unique development in so far as there appears to be no evidence the art was practiced by hand; that is without a machine. Ordinary weft knitting, no matter how complicated the stitch, can be and was accomplished by hand. Weaving and lace making can be done on primitive equipment. For instance, I have seen an African weaving alongside his lath and mud home with a wooden tripod to carry his healds, the warp tied to a post at one end and the cloth at the other while he moves along, with the tripod, as the weaving progresses. However, it is not readily apparent how warp knitting can be done easily without a machine and it certainly had to await the development of the knitting machine as far as we can tell.

It is not always considered useful to have a knowledge of the history of a technique in which one is actively engaged. It should, however, be an advantage and ceratinly in warp knitting we have nothing to lose by investigating the past. The inventors almost from the beginning displayed a wealth of talent and ingenuity which far exceeds the complexity of the fabrics we know today. Anyone who is prepared to study the early patents, Felkins, and other histories will benefit very greatly.

In the early days and at recurring intervals it had been hoped that warp knitting would become a serious competitor of weaving. The comparative simplicity of operation and speed of production were very favorable features. It was soon found a straight weft could be easily incorporated in the fabric structure and some of these methods in the last 25 years gave real encouragement that warp knitting would soon be competing with woven shirt cloths, suitings, carpets and the like.

It has to be admitted, however, that none of these hopes have been really consummated. The cheap carpets of today with one or two possible exceptions are not being warp knitted and none are being made with weft insertion. We have only a few specialty shirt cloths which make no real impact on the market. There is no real production of weft inserted fabrics.

What are the factors which have prevented a wider development and use of warp knitted fabrics?

In one system which I worked out while with FNF and based upon the suggestion of a Courtauld colleague, Ernest Cotterell, a warp knitted weft inserted fabric was made with a corrugated weft and fabric density closely allied to weaving. This also overcame one other problem common in knitted structures with weft, namely weft slippage.

The Raschel machine has been able however to seriously effect the lace trade. This is interesting because the first machine-made laces were produced on the original hand frames and, as is often the case, history is repeating itself even though the type of machine may be different.

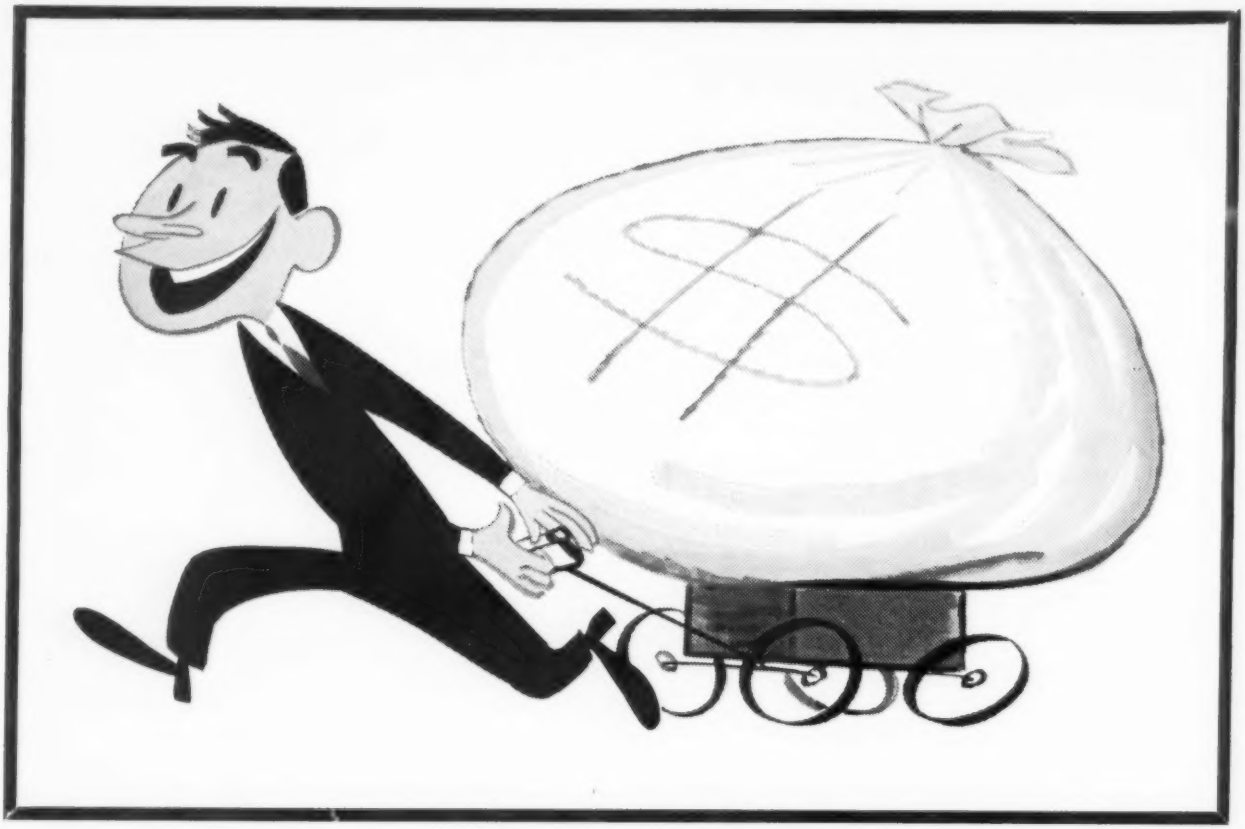
When we turn however to the increase in speed of production, simplification of operations and improvement in freedom from faults the improvements in warp knitting have been phenomenal. It will be interesting at this point to review the developments of the last 40 years. Here it must be said that the views expressed are entirely those of the author and have been pieced together in over 30 years' contact with the industry. They may be confused, or inaccurate, and it would be valuable to have corrections. As far as is known these events have never been so presented.

After World War I the British Celanese Company Ltd. needed to consume its large potential production of acetate which could be used as rayon. Realizing a warp knitting machine produced an ideal fabric they sought to buy modern machines. In those days in England there were about three buildings of warp knitting machines. The H.M.B. Company Ltd., J. Hobley Company Ltd. and A. Cooke. None of these builders was able to offer machines in the numbers required and the business went to Ernst Saupe of Limbach, Saxony, who produced a machine which for many years was the standard by which the performance of this type of machine was judged. Let it suffice to say that Great Britain lost a great industry to Germany. By 1832, British Celanese, I believe, had more machines in operation than in the whole of the U.S.A. at that time. Thus one apparently unconnected incident spurred a great step forward in the design and building of warp knitting machines. Large numbers, by this time, from other builders, were installed.

About this time another apparently unconnected development took place. Sir James Morton and his colleagues were looking for a better method of producing chenille yarn to be used in the manufacture of carpets, as I understand it, at Templetons. They decided to attempt making chenille yarn on a Raschel machine with a weft insertion for the pile and warp chains to bind it, shearing it between to separate the yarn. This development was most significant for it brought about two important changes. First it led to the development (not the invention) of a high speed compound knitting needle and a method of inserting weft without a shuttle, the speed of which could be almost unlimited. For instance, I used this machine to make overcoating and blanket fabrics at 800 picks a minute 84″ wide. Unfortunately, the chenille yarn proved unsuitable for carpets.

(*Continued on Page* 11)

Text of talk delivered at Seventh Canadian Textile Seminar by Mr. Peel who, from 1937-1951, was on research and development with FNF Ltd., builders of warp knitting machinery. He is a patentee of tubular needle, eccentric mechanism for warp knitting machines, originator of the slave end principle of controlling automatically the rate of feed of warp knitting machine beams. Mr. Peel became director of research for FNF Ltd. From 1952-1953 he was Bursar of Fourah Bay College, Freetown, Sierra Leone. In 1954 he joined Kidde Manufacturing Company, Bloomfield, N. J., and in 1955 joined Fidelity to do research in circular knitting machines.



To Dramatize HOW FACTORING HELPS...

11th ANNUAL

"FACTORING AND MILL FINANCING REVIEW"

OCTOBER 24, 1960

FEATURE ARTICLES

- **"Financial Ratios and Their Meaning"**
- **"Trends in Mill Financing—Non Notification Factoring vs. Old Line Factoring"**
- **Financing New Equipment Purchases Through Your Factor"**
- **"How Factors Help Their Clients With Their Marketing and Merchandising Problems"**
- **"Working With Your Commercial Bank"**

Leading Factoring firms have acknowledged that the "Times" has been largely responsible for eradicating many of the misconceptions relating to Factoring. They've credited the "Times" for presenting the "Factoring Story" authoritatively and without bias.

To continue this editorial program — designed to explain the mechanics of Factoring and how knit goods manufacturers and jobbers can profit from its use — with a simple, easy to understand factual slant — the "Times" will devote the major part of its October 24 issue.

Since editorially we'll be talking about Factoring and Financing in general, we'll be creating the perfect climate for interest in an advertising message about your services. Your representation will serve to identify you with the knit goods industry and help establish the basis for immediate and long range trade contact.

Call, write or wire for full details.
Deadline for space reservations: October 10.
for copy and/or plates, October 14.

Knitted Outerwear Times

386 PARK AVENUE SOUTH • NEW YORK 16, N. Y.

MURRAY HILL 3-7520

However, about this time Courtaulds were interested in expanding the warp knitting demand for their yarns and as part of an overall policy, established not only a large warp knitting plant at Braintree in Essex and Wolverhampton but acquired an interest in Sir James Morton's patents and FNF Ltd. came into existence. A. Cooke, the machine builder already mentioned, was approached to cooperate with Sir James and others to build these high speed machines. The idea was presented to him that a speed of 1,000 courses per minute was the target. He was so oppressed by the magnitude of this task that it brought on a nervous breakdown, which seriously impaired his ability to work on such a project. The author had the pleasure of showing the first FNF machine privately to Mr. Cooke in 1944, with his son explaining many of the changes that had been made. His son wrote to me in May 1960 confirming this and telling me that in 1949 his father recovered and was able to work with them on a Simplex machine. This project, like a similar one undertaken by another firm, Charnwood Engineering Company Ltd. Leicester, was unsuccessful. Mr. Cooke Sr. died in 1953.

Stepping back, however, to the point when FNF first attempted to build machines, it has to be recorded that in spite of the brilliant efforts of men like the late Lt. Commander Erskine Hunnay and Collingwood Carter the first models were failures. This was partly due to the design of the compound needle. This had been designed for coarser gauge operation and when it was decided to make the first models with 28 n.p.i. the scaling down of the needle rendered it almost useless. The layout of the machine itself was completely novel, the beams being near the floor and the overall height only about four feet. However this led to further complications both mechanical and in operation.

At this time the author became associated with the FNF development and, being aware of the original Peacock tubular needle, proposed to FNF that this might provide an answer to the problem. This eventually proved to be so and with other developments in which two very able English engineering professors cooperated, Profs. A. Robertson and J. Morrison of Bristol University, the first machine was run at 1,000 c.p.m. on commercially acceptable fabric in February 1939.

Although we had run at this speed before it was accompanied by many problems. So you can imagine the excitement at achieving this on a machine which basically was capable of sustained commercial production. The timing of this success was most unfortunate, for just as we were about to assemble six prototypes the war started and all work was suspended. We did however, solve some further problems, mainly with the let-off and tensioning, with the result we were able to demonstrate for the first time to the trade a complete machine in Courtaulds' offices in Nottingham in 1944.

A great deal of the history from this point is common knowledge. The demonstration by FNF that hitherto unheard of speeds were practicable has led not only to improvements in Raschel machines but the orthodox machines have also been redesigned so that with spring needles the speed of the FNF needle is being approached. However several of these developments show extensive copying of basic FNF ideas.

These improvements have been accompanied by the necessary developments on the auxiliary equipment like warping high speed dyeing and later, on nylon, the setting process.

One of the purposes of a paper of this kind is to review not only the developments which led to the present state of the art, but also to study where the equipment still needs improvements and what can be expected. Here one steps immediately from the realm of the historian to that of prophet with all the risks of being found an unreliable forecaster! Here we can deal with the present and discuss it so that the industry at large can see where we stand.

In order to clear the field of considerations which are not our concern, we can say first of all it would seem yarn developments, at least in North America, have in many respects reached a satisfactory state. This is not to say there is no room for improvement, or that we do not have ideas on the subject, but it is evident that while we can inspire or sponsor improvements they can only be carried out by experts. One very interesting yarn development is the new Du Pont Spandex Lycra, an elastic yarn. This is fully described in the Du Pont Magazine for March/April 1960.

It could be argued with some force that yarn developments in any case are coming too fast for us, so we do not need to encourage development too much here. Once the yarn comes into our hands however, we become the controllers of its destiny. Our task is largely divided into two parts, if we neglect the dyeing and finishing which again is not my province.

We should, of course, attempt to understand the dyeing and finishing developments. For instance, the new singles bath ICI Procion dyeing and resin treatment method may be very important to us. We are primarily concerned with the yarn preparation, mainly warping, and knitting which involved both the mechanical technique and the styling of the fabrics.

Warping

As we are considering the technique from the point of view of a warp knit fabric manufacturer, we can do one of two things. We can buy the warp ready made from the yarn producer. For standard high production fabrics this has a lot to commend it. The economics of this operation in a yarn producing organization show that a 42 inch warping machine under present conditions gives optimum results. These are involved, taking into account perfections of yarn, size of creel, floor space, speed of warping, and handling facilities.

In the warp knitting mill, however, I believe the 27 inch wide machine gives optimum results. This opinion can be substantiated from calculations which take into account loading and unloading both creel and mill, stoppages for cleaning and yarn breaks, gumming out, etc. One great disadvantage of attempting in a knitting mill to warp wider than 21 inch is the size of creel and the large down time for unloading and loading if a single end creel is used. This problem can be minimized by using two creels or a magazine creel, but the floor space occupied becomes great and the amount of yarn needed is large. Thus this really is only practicable for the yarn producer.

Except for the very small production of exclusive fabrics, the direct warping system is best. By direct, I mean going straight from the yarn packages on a creel to the spool or bobbin to be placed in the knitting machine. This method is not without its difficulties of which levelness, tension, flange problems, etc. are but a few. Speaking with some experts recently at Textile Machine Works, I understand collars on the flanges are still a serious trouble. It was suggested many years ago that the buttress of the flange of spools should be on the inside and not out the outside. If this could be done, flange rubbing would largely disappear as the slide illustrates.

Naturally, someone will suggest that you cannot warp this way with a constantly changing warp width. Frankly, I believe this is not such a great difficulty as it would appear on first sight. Consideration of this difficulty brought out one further factor which would be involved in using an expanding warp width, that of the function of the presser roller.

High speed warping today uses mainly two techniques, either a presser roller or levelling rollers. The alternatives were ably represented by Reiner & Cocker on the one hand and FNF on the other. Both methods produce a level warp. It is important from the point of view of what I have to say that we appreciate the FNF method does produce a level warp for it tends to prove the statement I am about to make, namely that a presser roller is unnecessary. We need to consider how the presser roller came into existence. It has always been appreciated that constant linier speed of yarn during warping is very desirable and even essential. This is most easily obtained by driving the spool through frictional contact between the yarn, and some harmless surface like a felt or cork covered roller looked ideal. It is most satisfactory until you

(*Continued on Page* 19)

ROYAL

THE FIRST NAME IN DYEING

...and the 3 WAY LEADER IN PROCESSING ORLON SAYELLE

...in Skeins

...in garments and fabric strips and now

...in Package Form

ROYAL	YARN DYEING CORP.	SKEIN DYERS AND BLEACHERS OF WOOLEN, WORSTED, ORLON, NYLON, SPEC. FIBER, BLEND YARNS
ROYAL	KNITGOODS DYEING CO., INC.	SWEATER AND KNIT FABRIC DYERS OF ORLON, ACRILAN, TEX. NYLON, DACRON, OTHER SYNTHETICS, BLENDS **NAPPING AND SHEARING OF ALL FABRICS**
ROYAL	PIECE DYEING CORP.	PACKAGE DYERS OF ORLON SAYELLE, 6 DEN. ORLON, DACRON, ALL MAN-MADE FIBERS, WORSTED, FUR AND MOHAIR BLENDS

340 MORGAN AVE., BROOKLYN 11, N. Y. **EVergreen 7-9000**

begin to consider high speed, heavy spools, and severe braking.

During the transitional period between the original application of direct warping and present methods the original purpose of the felt covered roller was lost sight of. Its function gradually changed from that of a means to drive the beams to one of controlling speed by influencing the motor drive and to act as a leveller. In the former function it is ideal and unnecessary in the latter. The reason I say this is because I consider the levelling rollers are only useful as a speed controller. They do not level out uneven tension but tend to exaggerate differences. If this is so, then we can stop using a levelling drum or roller, sense the beam diameter electronically to control speed and then go to our inside taper flanges. The expansion of the warp can be controlled by a sound form of tapered reed and we can then make better warps.

This does bring out, in my view, one great weakness of the warping operation, that of controlling tension off the yarn package. Unfortunately, no tension device is available which will reliably control the basic level and compensate for it below about 4 grams, with simplicity and low cost. On seamless hose machines you could afford to pay $25 to $50 for a satisfactory tension device, for you have only a few ends to control and the rest is worth it. On a creel with say 600 ends the cost becomes prohibitive.

On the North American continent I do believe a mistake is being made in the yarn packages for low denier nylon. The long parallel cone is most unslitable and contributes considerably to the tension problem. A tapered pin should be used as some European spinners are supplying.

This tension control problem at low tension is being very thoroughly investigated again and it is possible in the near future a new approach will be found. On a creel however, it seems to me some form of overall adjustment is needed so that the tension on every end can be modified without having to do each one individually.

In the present production setup the cleaning of yarn during warping should not be necessary on standard high production yarn. The cost in efficiency of the steps involved is too great. If cleaning has to be done there must be some over-riding reason which warrants spending labor on it. Even if you use electronic detectors, it seems doubtful if the end result is worth it.

From a practical point of view the treatment and handling of warps are very important. I understand in the mill it is very difficult to prevent damage to the edge of flanges. Of course, the inside buttressed flange I have spoken about offers considerable advantage here as the yarn never touches the flangle. It does appear however, that considerably extra damage is caused through failure to design a proper system of beam handling.

When we came to consider the knitting machine itself, a manufacturer is faced with so many alternatives that it is difficult to determine which is the best machine for his purpose. As I suggested earlier, many of the later new machines have been inspired by the fundamental changes introduced on the FNF machine. This is a natural and desirable course.

It seems clear to me now that the minimum speed on two bar tricot machines will be in the neighborhood of 800 c.p.m. If this is attainable with perfect production is there any advantage in going higher? If we could assume that at this speed the operation was 90 percent efficient, i.e. we obtained 90 percent of the output based on machine running 100 percent of its time with no stops for any reason whatever, not even for rethreading (this is the only practical basis in my view). As the lost 10 hours out of every hundred is the irreducible minimum for operations which may not be eliminated or speeded up, then we can reckon that we are always going to have this irrespective of machine speed. Any increase in speed will therefore affect only the 90 hours.

This will be reduced as shown in Table I below.

The drop in efficiency from 800 to 1000 is small, two percent, and for this one gets a 20 percent increase giving a net 18 percent in output. At 1250 we drop five percent in efficiency and get 30 percent with a net 25 percent, at 1500 seven percent loss and nearly 100 percent increase with a net 93 percent, at 2000 11 percent for 125 percent a net 114 percent.

You can see from this nearly doubling the speed only gives 72 percent increase in production.

This requires a much closer watch on mill efficiency to make the speed pay. The above figures are based on assumption all other things remain equal which they do not for the capital cost, running expenses, and possibly replacement of parts will be higher.

It is clear from such figures as this that the aim must be to prevent the knitting machine from stopping for any cause. For this reason I have some doubts about stop motions of any kind. Usually they involve more down time and result in more end breakage and, of course, they cost money. The industry has been chided for not solving the stop motion problem. Such a solution in my view must be on the basis that there is no increase in down time, no increase in tension, broken ends or machine difficulties and be almost 100 percent efficient for all fabrics. Can such a device be produced? There is at least one approach to this which might achieve this formidable success but it has not been developed far enough yet.

Some other attachments are important. What the weaver calls "temples" to hold the selveges should have reached a more general use than is apparent.

What has been said so far about increases in speed, etc. on tricot machines of course applies to Raschel machines, and with the latch needle the effects of speed may be somewhat more costly.

Samples of modern Raschel lace have probably been inspected by us all but in case not we have one small sample here.

The industry has therefore available to its some of the most versatile machinery with higher productivity than ever before. As converters of yarn into fabric it is no exaggeration to say that we can make more lbs. per hour than any other method known, especially when you consider wider widths. Can this great potential be used either to create an enormous demand for a new fabric or compete with other methods like weaving?

So far one has to say that as far as normal fine cloth weaving is concerned the chances are very slim. Even if we could convert the yarn into cloth for nothing you cannot imitate, so far, the properties of woven fabrics with yarns of equivalent counts and quality. In almost every case the warp knitting machine requires finer, better quality yarn than a weaver can tolerate. The knitted equivalent has not been able to give the strength of the woven cloth.

In 1951 I made a men's suiting of wool, viscose and nylon on a 28 gg. tricot machine. It was excellently dyed and finished including crease resistance. A suit was made by one of the best tailors in the United Kingdom. The result was disappointing. There was obviously a serious lack of those qualities we have become accustomed to expect from woven cloth. We have also here a nylon/worsted ladies' outerwear cloth made on an FNF 28 gg. machine.

This, therefore, narrows the field considerably and so far, the greatest potential appears to be in lingerie, laces, foundation garment fabrics. I do not even think be can consider competing in the hosiery field. We have a sample here made on a tricot machine of a fine stocking but it cannot possibly be accepted at the side of what is available from conventional seamless hose machines.

If the demand for warp knit fabrics is to be extended, then it seems new fields must be explored. One of these may be in

(*Continued on Page* 36)

TABLE I

Speed	800	1000	1250	1500	2000
Net production time for unit weight..	90	72	57.5	48	36
Total production time for unit weight..	100	82	67.5	58	46
Efficiency then becomes.....	90%	88%	85%	83%	79%
Total output [on basis speed of 800 = 100 units].....	100	122	148	172	217

another significant technical advance—from Keystone, of course!

Fur Blends
MATCH WITH LASTING LOFT

The color consistency and loft of Keystone-processed fur blends marks a new industry standard

Now, Keystone's unique process gives plush, high-style fur blends a haughty, cashmere-like feel that *stays* aloof and resilient. Another important example of Keystone's continuing progress in better dyeing to achieve the quality you want.

Write, phone or send samples for processing . . . your inquiry will get fast personal attention.

KEYSTONE
DYEING COMPANY, INC.

3213-23 Amber Street, Philadelphia, Pa. • REgent 9-2575

Southern Representative: COLLINGWOOD, IBACH & CO., 205 So. Church St., Charlotte 2, N. C.

Continental Fashions

Coordinated Outfits Shown In Double Jersey Fabric

A V-neck cardigan is boldly highlighted with big, bright buttons to top a matching knitted skirt. Neckline interest is emphasized by contrasting blouse or complementary jewelry.

A three-piece coordinated outfit features a Chanel jacket over a contrasting blouse. Trimmed in opposite colors, the jacket matches a knitted skirt while the blouse complements it colorwise.

Double rows of button trim outline the front of a jewel neck jacket. Long sleeves simulate French cuffs with contrasting trim and button interest. The deeper shade of the trim and buttons match an accompanying knitted skirt.

Horizontal stripes create a casual air for a short-sleeved knitted shirt whose collar and cuffs are trimmed to match the darker tones of its coordinated skirt. White buttons add a cardigan effect to the shirt.

Push-up sleeves and outsized pockets are featured in a collared jacket which identifies with its matching skirt to form a single outfit. A single thin horizontal stripe across the bodice is as eye catching as the bright metallic buttons.

THE JSD . . .
FOR 24 FEED
YARDGOODS JACQUARD PRODUCTION
WITH UNLIMITED PATTERN RANGE For yardgoods production of Jacquard knit fabrics . . . the Model JSD . . . 24 feeds . . . 24 Jacquard automats . . . 4 color yarn changers . . . 30″ diameter . . . up to 20 needles per inch. Piqué . . . Twill Back . . . Blister . . . Rib . . . Tuck . . . Two-Three-Four Color Welt Back Fabrics . . . Unlimited Pattern Range. Ideal for high production of unique fabrics. Ask for complete details on this new model, the JSD.

WILDMAN JACQUARD

WILDMAN JACQUARD CO. • 1210 Stanbridge St. • Norristown, Penna. • Manufacturers of HEMPHILL BANNER Knitting Machines

A subsidiary of Draper Corporation, Hopedale, Mass.

Knitted Dresses

Trade's Design Skill, Inventiveness Basis Of Demand, Goldworm Says

Industry-wide ingenuity was credited with the sound state of the current knitwear market by Robert Goldworm of Goldworm Sportswear in a recent interview.

"The fashion market is built on what women want rather than what they explicitly need," he stated. "Repeating the same fashion by copying best-selling numbers brings quick saturation of the market."

European Division

Goldworm's recently expanded European operations manufacture hand-fashioned, fine gauge goods.

The firm's introduction of European-based flat knit goods several years ago is credited with giving a fresh impetus to the knitwear market when the boucle knit dress boom died. The import business, then as now, helped domestic business throughout the trade, Mr. Goldworm claims.

Mr. Goldworm stressed the recently increased demands made on the knitwear manufacturer by both retailer and consumer. "The time has passed," he said, "when a manufacturer could expect to sell a dress which would lose its shape easily. Knitted dresses are now sold on racks right along with their woven fabric cousins and must therefore retain their shape as well, even though a purchaser might still care for the garment by storing it folded."

Goldworm's holiday line, which will be delivered at the end of November, introduces several new numbers as well as varying some old favorites with stylistic innovations.

Pique Fabric

The basic jewel neck dress is shown this season with three-quarter sleeves in aqua, beige and black. A polo neck, short-sleeved number comes in off-white, red and navy. The pique stitch used here produces a heavier knit. A multi-colored horizontal stripe on off-white is shown in a jewel neck style.

Basic black is the color favorite of a collection being shown for the first time this season. A sleeveless number shown both with and without a blazer jacket is trimmed with satin along a modified boat neck, on sleeves and on jacket. Another black with elbow-length sleeves is trimmed with black sequin patterns to contrast a sleek, sheath skirt.

Sequins Used

Multi-colored satin peeps through embroidered window-like effects on another number shown in beige and gray. A gay profusion of sequined butterflies rests on the bodice of a variation on basic black for a bright trim detail without gaudiness.

In black and beige a silk trimmed knit is highlighted by a crescent scroll which offsets a modified boatneck.

The casualness of a coat dress is simulated in a mock wrap knit which is shown in beige, aqua and navy.

The ensemble buyer seeking basics is the consumer target of a ⅞ coat topping a basic dress in black or beige. Both coat and dress are trimmed with silk.

A lacy shell knit is shown with both scoop and jewel necks, as a sleeveless sheath or with a jacket. Black, Dior blue and beige are big colors here.

Goldworm's spring line will be released some time in October for January delivery.

Fiber Personnel

Industrial Rayon V.P.

John W. Brownley has been elected vice president-manufacturing of Industrial Rayon Corporation, it was announced by Frederick L. Bissinger, president. Mr. Brownley previously was production manager.

Appointed By Bancroft

WILMINGTON, Del. — Farouk Moussa has been named assistant manager of the Joseph Bancroft & Sons Co. office in Zurich, it was announced by W. R. MacIntyre, president of the company.

PROFITABLE PRODUCTION CONTROL

Our carefully controlled production schedules give our distributors a distinct advantage. They can definitely plan to service their customers throughout the fall and winter selling season.

This makes their last calendar quarter most active and profitable.

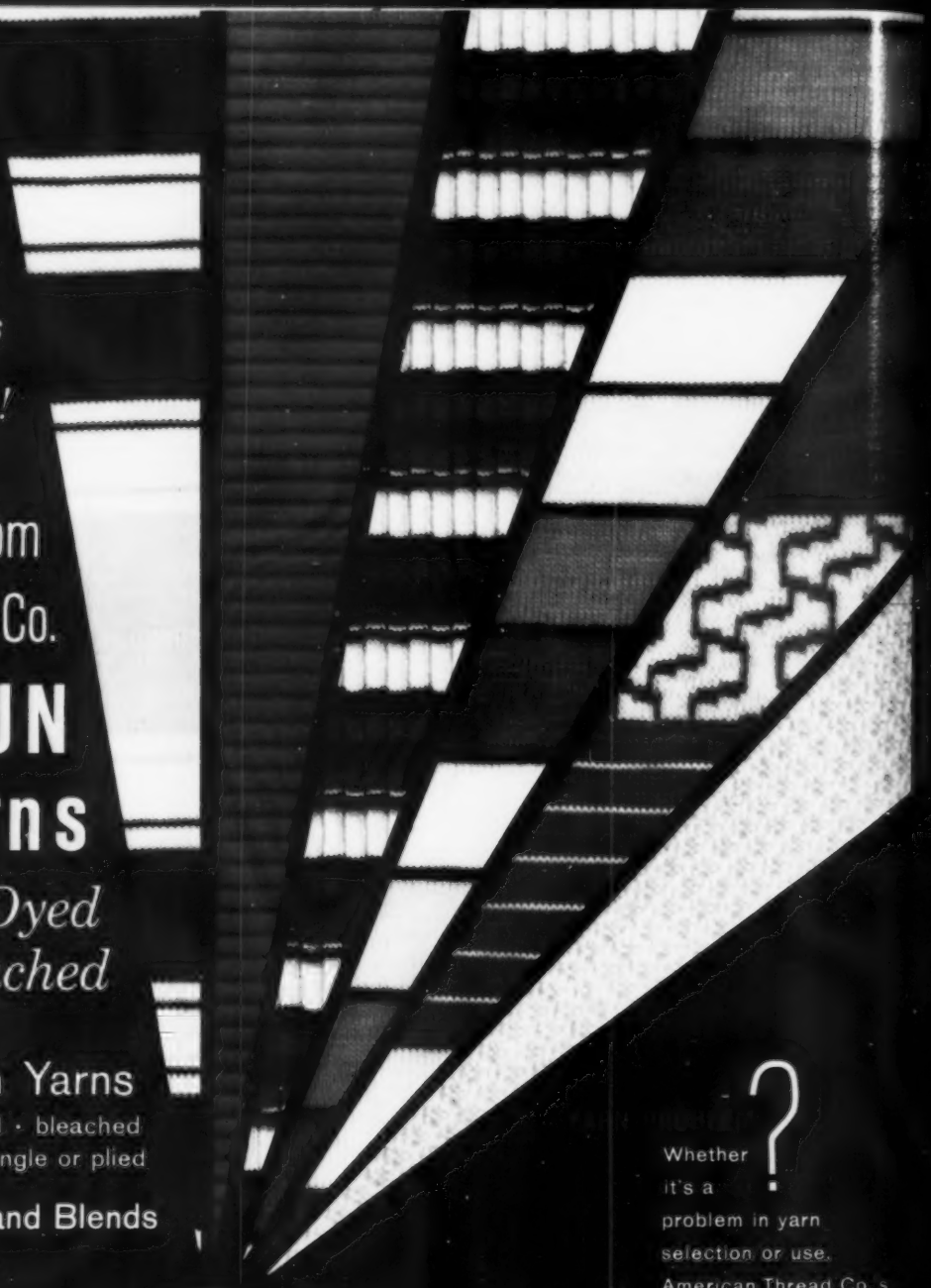
The Lion Knitting Mills Co.

3256 West 25th Street ■ Cleveland, Ohio

Designers and Creators of High Quality Sweaters and Knitted Shirts for Men

DISTRIBUTED TO THE BETTER STORES BY SELECTED KNITWEAR SPECIALISTS

Better Outerwear Sales At The End Of This Rainbow!



Fabrics Knit From American Thread Co.

STAR SPUN Yarns

Yarn Dyed And Bleached

✳ Combed Cotton Yarns
natural · mercerized · dyed · bleached
gassed · single or plied

✳ Spun Synthetics and Blends

Hampton Durene® Cotton

Superloft Nylon

processed and quality controlled at The American Thread Co. from fiber to finished yarn

Superloft is a registered trademark of Leesona Corporation

Whether it's a problem in yarn selection or use, American Thread Co.'s specially trained personnel and laboratories can help. Why not talk it over?

call, write, wire:

YARN DIVISION

THE AMERICAN *Thread* COMPANY

260 West Broadway
New York 13, N. Y.
Tel. WAlker 5-1000

Sales Offices: Philadelphia • Boston, Mass.
Northampton, Mass. • Greensboro, N. C. • Chattanooga, Tenn.

Swimwear

New Plant Producing For Rose Marie Reid

LOS ANGELES, Cal.—The first swimsuit made at Rose Marie Reid's new manufacturing plant at Orion Park Plaza in Van Nuys came off the production line less than thirteen hours after the plant opened.

The 150,000-foot building also houses administrative offices.

The firm will continue to use its present building at 5200 West Century Boulevard in the International Airport industrial tract for the manufacturing and administrative operations of Marina Del Mar swim suits and Cortina Knits, women's sportswear separates.

James Little Promoted To R-M-R Purchasing Chief

LOS ANGELES, Cal.—James Little has been promoted to chief purchaser for Rose Marie Reid. He succeeds Harry Kassler, now export administrator and sales coordinator for Rose Marie Reid International Ltd., in Zurich.

The first Rose Marie Reid swimsuit off the line at the company's new factory in California is modeled on the steps of the swimming pool in front of the 150,000-square-foot installation. The plant has a new materials handling system and also houses administrative offices.

BENTLEY

THE OUTERWEAR MACHINE "To pass all men's believing"

COTTON

FULL FASHION FULLY AUTOMATIC

BENTLEY

320-0

We claim so much for Bentley's UO/AE! Words can't describe; your eyes must tell you.

We didn't design this full-fashion fully automatic outerwear machine with the word *unbelievable* in mind. But that's the way it's turned out with the result we can't adequately describe its superlative features. What we're going to have to do then is simply say to you — see *it!*

See the fastest thing on a knitting room floor. See the exclusive styling features for producing the finest in outerwear fabrics and fibers.

Ask us how this UO/AE can be seen . . . *in action.*

BENTLEY KNITTING MACHINERY

THE Bentley KNITTING MACHINERY ORGANIZATION, INC.

BLUE CROSS BUILDING • 31 CANAL STREET, PROVIDENCE 2, RHODE ISLAND, U.S.A.

Southern Office: P. O. Box 1887, Liberty Life Building, Charlotte 1, N. C.

In Canada: W. J. WESTAWAY COMPANY, LTD., Hamilton, Ontario

Don't Compromise . . Don't Improvise . . Don't Apologize . . Knit It On A BENTLEY!

New Product Ideas For Knitters:

How Knitters Can Make More Money in Spring '61 With New Perma-Bond Foam Lamination Ideas!

this garment is lined with...

PERMA-BOND®

warmth without weight

URETHANE FOAM FOR TEXTILES MADE WITH DU PONT HYLENE

A. D. GOSMAN, INC. • CARTERET, N. J.
A DIVISION OF PRECISION PROCESSING CORP.

Now there's a new season for you, in addition to the established Fall season for foam laminates! Markets you have never sold before can be reached with these new concepts—besides expanding your present markets.

Tricots, light gauge jerseys and flat knits in all natural and man-made fibers for rainwear, spring-weight jackets, car coats, swim and beachwear! Contrast-color unlined reversibles in double laminates—yet zephyr-light for Spring! All possible with Perma-Bond's new, perfected double and single lamination using wafer-thin 1/32" foam that stabilizes the knit—stops sag and stretch!

For women's slacks and toreador pants this is a completely new idea that opens still further horizons. And it's utterly fantastic with Helanca for swimwear!

Important:

Due to Gosman's leadership in the field of foam lamination, it would be wise to contact us *early* (like *now*) so we can reserve time to discuss *your* product development planning with you.

A. D. GOSMAN, INC.

1001 ROOSEVELT AVE. CARTERET, N. J.
FROM NEW YORK, DIAL 11—THEN KI 1-4226

A DIVISION OF PRECISION PROCESSING CORPORATION

Not enough working capital?

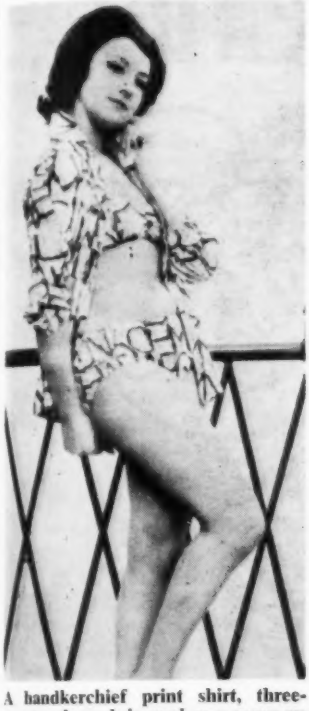
Worried about credit risks?

Too much bookkeeping and collection work?

The solution: factoring by Meinhard.

Continental Swim Suits

Bikinis In Lady-like Ruffles



A handkerchief print shirt, three-quarter sleeved, is used as a cover-up for a bikini manufactured of a similar bold and bright material.

The bra and skirt of this bikini model are contrasted with two-toned trim in a ruffle effect. The bra's lines are brief.

Gingham checks and a demure apron effect are surprises created by the simple lines of this bikini swim suit topped by a matching gingham and ruffled bra.

A half skirted effect is created by this suit's ruffled trim which is echoed in the lines of a brief but beruffled top.

all these firsts...

HAVE MADE ALLEN KNITTING MILLS THE FIRST IN 100% ACRILAN® ACRYLIC JERSEYS

FIRST 100% ACRILAN Jersey

FIRST "REDMANIZED"® Jersey of ACRILAN

FIRST Jersey in hi-bulk ACRILAN

FIRST in hi-bulk ACRILAN fancies and stripes

FIRST in yarn-dyed ACRILAN

FIRST in worsted-spun ACRILAN

FIRST in Type 16 ACRILAN

FIRST with Allenella Jersey Prints

FIRST with Eleganté—highest-quality Jersey knitted of worsted-spun Acrilan available in 2-denier

FIRST with Scottfoam Eleganté—Eleganté with Scottfoam bonded to it, creating new horizons for outerwear manufacturers

Allen Knitting Mills produced the first 100% Acrilan Jersey. Manufacturers asked for more . . . and more. Allen turned out, not only more – but entire new concepts in ACRILAN Jersey listed above.

Whatever you manufacture in Jersey, one or many of the ACRILAN Jerseys listed here can bring you "firsts" in peak sales. Come in and consult with us . . . we'll show you how the inventiveness that produced all these famous Allen "firsts" can work for you!

ALLEN KNITTING MILLS, Inc.

1412 Broadway, New York 18, N. Y.

LOOK TO CARON'S BLEND OF A

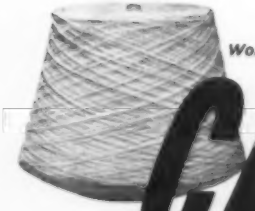
ACRILAN*

ACRYLIC FIBER

*Registered trademark of The Chemstrand Corporation

for variegated colorings in a rainbow of beautiful shades

Marled yarns and Heathers in your knitting plans? Then it will pay you to consider Caron's ACRILAN blend . . . the perfect blend of fibers to give you a veritable rainbow of beautiful shades with a minimum of dyeing effort. Caron's ACRILAN blend is *new* . . . and it's *good*. You'll like it . . .



Worsted • Orlon • Nylon • Acrilan • Alpaca • Mohair • Caraloft • Carafrost • Caravel • Yarns for Ban-Lon® Garments

CARON spinning company

ROCHELLE, ILLINOIS • ROBESONIA, PA. • NEW YORK CITY

Swimwear

Lee Swimwear Holds Meeting At Nevele

Lee Swimwear representatives held their annual sales convention at the Nevele Country Club, Ellenville, N. Y.

David Goell, of Goell & Goell, accountants, spoke on the economics of swimwear, and Marshall Bachenheimer of Lester Harrison, Inc., advertising agency, disclosed promotion plans for the new lines.

Tom Levy, sales manager, reported a growth of sales during 1960. He said Lee's extra large swim suits were the most extensive and flattering in the company's history and that purchasers sent grateful letters to the company.

Gerlock, Bra Maker, To Make Swimwear

LOS ANGELES, Cal.—Gerlock of California, Inc., manufacturer of Star Fashions of Hollywood brassieres, has started a swimwear line under the same name, priced from $5.25 to $7.50.

Rose Burger, formerly of Cole of California, Catalina and Rose Marie Reid, is head designer. Two-piece styles will be emphasized. The bra tops will have elasticized sides and backs and a wiring arrangement to permit easy adjustment from B to C cups.

The line includes two-piece cotton and rubber knits in floral patterns and textured jacquard, orlon or nylon knit with rubber in plain or print one-piece maillots, sheaths with novelty detailing and two-piece cottons with floral and checked prints.

David Gerber is principal of the firm and Kenneth Klein is sales manager in 11 Western states. Sales office for the new line will be opened in New York and Chicago. A trade and consumer advertising campaign is planned.

Appointed At Darlene

Lionel Surkin, formerly with F. Jacobson & Sons, has been appointed assistant sales manager of Darman of New Hampshire, the men's wear division of Darlene Knitwear, Inc. Darlene also operates ladies' swimwear and sweater divisions.

Now Spinning . . . for Prompt Delivery

TURBO ORLON® ACRYLIC MARL

ALL COLORS . . . ON CONES.

Delaine WORSTED MILLS, INC.

GASTONIA, N. C.

DO YOUR FINISHING DEPARTMENT A FAVOR!

USE GROVE'S Nylon and Dacron . . . SEPARATING THREADS

- Withdraws easily and smoothly without breakage
- Non-curling — it peels off spool evenly
- All constructions in inventory

samples upon request — immediate delivery

DON'T FORGET GROVE FOR HELANCA®, SAABA® AND SUPERLOFT STRETCH YARNS!

GROVE NYLON CO. SCRANTON 10, PA. Diamond 4-1174

SALES OFFICES
NEW YORK ..... SPring 7-2798
CHICAGO ..... IRving 8-5722
PHILADELPHIA ..... IVyridge 3-1591
CHARLOTTE ..... EDison 4-6312

BELMONT THROWING CORP.

BELMONT, NORTH CAROLINA

THE BIG 3 FOR SMART KNITTERS

Vision-ora

An improved smooth textured yarn created expressly for Sweaters of all types, Knitted Fabrics, Swimwear, etc.

Helanca®

Hi-Test Stretch Yarns

Specially processed for quality Leotards, Bathing Suit Fabrics, Girdle Fabrics, etc. In Natural and all colors.

Helanca®

TYPE SW

The Helanca textured yarn with the Boucle effect particularly designed for Sweaters of all types.

Represented by BRANT YARNS Inc. 1412 Broadway, New York 18 LOngacre 5-3350

New Dimension in Design

Rimoldi class 27 and 60/1/L have been enthusiastically acclaimed *by* Knitwear Manufacturers

Rimoldi *class 27.7*

Perfected Especially for EXTREMELY BULKY KNITS

. . . this machine is equipped with Exceptionally High Lift and Increased Differential Feed

There are Rimoldi overlock machines for every hemming, overedging, seaming, joining and gathering operation.

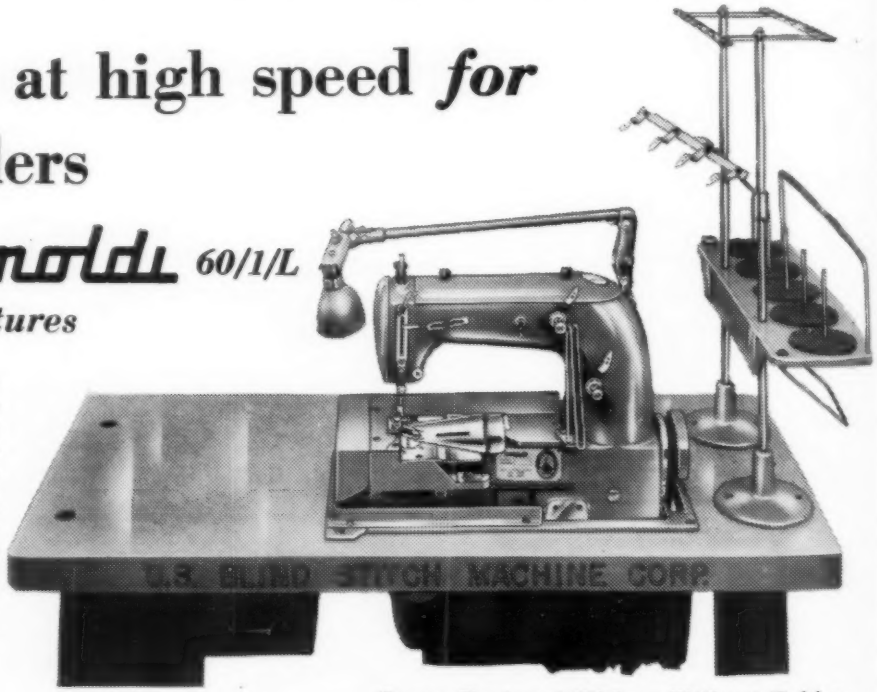
• Straight Needle — less breakage, better stitch control, less cost, no puncturing of material. • Extra high lift combined with straight needle assures perfect stitch formation on bulky materials. • Fully Automatic Lubrication — 3 quarts of oil pumped throughout the machine every minute. • Push-button stitch length control gives you the advantage of changing number of stitches per inch without the need of changing cams. • Automatic adjustment of differential — when changing from bulky to light fabric, there is no need to change cams. (Differential can be adjusted even when machine is in operation by knee control—available on request.).

Quickest threading — completely from front of the machine. • Constant Stitch Control — due to micromatic adjustment of tension discs. • Works perfectly on heaviest or lightest Knits. • Finest Workmanship combined with finest materials assure years of trouble-free performance.

Looping quality at high speed *for* collars and borders

The Amazing New Rimoldi *60/1/L offers these Exclusive Features*

• A Finish almost indistinguishable from Looping. • A system of guides especially designed for attaching collars and borders automatically. • Both needle and looper sew perfectly with all types of thread or the same yarn used for the fabric: wool, Orlon, Ban-Lon, etc. • Double locked chainstitch seam which does not ravel. • High speed . . . up to 4,000 stitches per minute. • Fully automatic lubrication. • Simple to operate, easy to adjust.
Ideal for Knitwear, due to elasticity of seam.



Comes Equipped With or Without Folder

Sole Distributors in the United States and Canada

U. S. BLIND STITCH MACHINE CORP.

231 West 29th Street • New York 1, N. Y. • LAckawanna 4-9144

Yarn Processing

Plan Spinning Mill For Shetland Crop

In Shetland, the Scottish Council (Development and Industry) is seeking to develop a spinning mill, to provide the Shetlanders with their own facilities for handling the Shetland crop. This is a matter which has been under discussion for a long time but it would now seem that some results are likely to emerge following visits paid to Shetland by Scottish Council executives and the promise of Government support.

The woolen trade in Shetland is behind the scheme to a considerable extent. The plan is to locate in Shetland a woolen mill capable of covering the entire island clip; in effect, to make the Shetland industry self contained.

The Scottish Council investigations suggest that an investment of £200,000 to £250,000 will be needed to launch the scheme. The Shetland wool clip is estimated variously at between 200,000 and 500,000 lbs. per year. The mill would handle the smaller level on a one shift basis and the larger limit on a double shift. At present all Shetland wool is processed and spun on the Scottish mainland. Many of the crofters who produce wool actually send it in small bundles to the mainland to be processed and spun. The larger firms and merchants run a well-organized processing service, but it still involves double travel and handling. If the scheme is accepted the new mill will produce yarn for both knitters and weavers. The location of a mill on the island would deal with materials for which a potentially considerably greater market exists. It would in effect allow the Shetland islanders to make the most of their unique wool clip. According to the Scottish Council, the Shetland knitwear industry is at the start of a new phase with every intention of aggressive selling in world markets of Shetland-made garments.

AviSun Names Distributor

MARCUS HOOK, Pa.—AviSun Corp. has appointed Dixon & Co. of Denver as distributor in the Rocky Mountain and adjoining states for AviSun's new Olefane polypropylene packaging film.

This is the Clipman talking
CLIPS
CLEAR PLASTIC KAM Clips
ALUMINUM TEXPAK Clips
NICKEL-PLATED BRASS PERFEX Clips
Texpak INC.
TEXTILE PACKAGING DEVICES
381 Fourth Ave., New York 16, N. Y.
A SPECIALIZED BUSINESS WITH SPECIAL SERVICE

Specialists in:

- cashmere
- camel's hair
- lamb's wool
- fur fiber blends
- angora blends
- shetland types
- kid mohair blends
- dyed-to-match and coordinated fabrics

WINONA TEXTILE MILLS, INC.

Depend on . . . WILSON TRADING CORPORATION

COLONIAL WOOLEN MILLS, INC.

Meeting the requirements of America's leading knitwear manufacturers calls for experience, skilled craftsmanship and the capacity to produce in quantity . . . on time.

Here at W-W-C, we pride ourselves on our ability to fulfill your exact specifications in all phases of the woolen spun system.

We invite your inquiries

NEW YORK OFFICE:
1440 Broadway · PEnnsylvania 6-1487

MILL:
W. 65th & Barberton · Cleveland 2, O.
ATlantic 1-3200

W W C

Sales Representatives

W. H. HUTCHINSON
222 W. Adams St.
Chicago 6, Illinois
FRanklin 2-0224
Teletype CG 2127

PAUL A. BARKER
1182 Broadway
New York, N. Y.
Murray Hill 9-0422

FREDERICK P. TOLNAI
819 Santee Street
Los Angeles 14, California
MAdison 2-5777

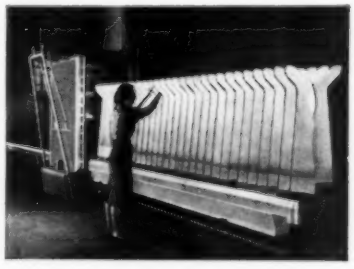
Speaking of Elasticity

Hosiery Buyer: "I want more elasticity for fullest, comfortable fit."

Hosiery Manufacturer: "I want full elasticity with or without use of pre-set yarns."

You'll both be happy with stockings dyed and finished on the *Turbo Dye Boarder.* The Turbo Dye Boarder provides the elasticity hosiery buyers insist on . . . and gives hosiery manufacturers the desired elasticity in seamless stockings with or without use of pre-set yarns in welts, heels, and toes. Stockings can be knit throughout of raw pirn yarn.

Pressure dyeing in the Turbo Dye Boarder accomplishes deep penetration of dyeing and finishing materials into the fiber, bringing about rich color values, more life and elasticity, better light and wash fastness, better snag resistance, and longer wear. Production capacity is 140 dozen pairs per shift with one operator. Bulletin on request.



TURBO . . . a family of engineered machines

TURBO MACHINE COMPANY, LANSDALE, PA.

Licensed Builder for Spain: Argelich, Termes y C. A. Tarrasa, Spain

Ladies' & Misses'

Cashmere Basic In Bonnie Briar Holiday Group

Cashmere is artfully blended with fashion to create Bonnie Briar's holiday and cruise line of dresses and sweaters. Over 50 styles are offered in a line of full-fashioned cashmere dresses which are shown in a muted color range stressing the deeper tones rather than the pastels.

Elasticized waists, slim untrimmed skirts and three-quarter sleeves characterize most dresses in the collection. Interest is added through collar variation and bodice detailing. The standard shirtwaist-like front is seen along with a double-breasted model. Other neckline designs include cowl, V, scoop and turtle necks, and shawl or roll collars. Trim details range from bows to tassels to pocket effects.

Multi-Color Designs

Two and three tone patterns are popular, as well as a bolero style.

Cocktail dresses trimmed with lace offer room for an imaginative play of dressy effects. Embroidery and lace yokes and scooped or cowl necks top sheath skirts. Cashmere's luxurious qualities are heightened to their logical extreme.

Merino wool dresses, knit on 30 gauge machines from French-spun yarn, are finished with a cashmere-like hand. Styles in this group are almost identical with the cashmere dress collection. A choice of 15 colors is offered, with red, royal blue, a shade of beige known as coffee, bluish grays and grayish blues predominant. Lilac is a best seller here.

A tie neck model is the single best seller in both dress groups.

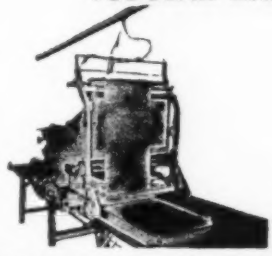
Cruisewear Numbers

Cruise coordinates create a costumed look with two colors in sweaters which match solid skirts a popular style. Striped skirts match their solid sweaters with striped trim.

One wrap-around skirt, bound with a bright jeweled button, repeats its lines in a wrap-around

(*Continued on Page* 29)

THE BEST WAY TO LAY UP TUBULAR KNITS FOR CUTTING



CRA ELECTRIC KNIT GOODS LAYING UP MACHINE

FASTER, MORE ACCURATE, TENSION-FREE... PAYS FOR ITSELF IN SAVINGS OF TIME, HELP, MATERIAL.

FINDS—REMOVES LOOSE THREADS FROM FINISHED PRODUCT

CRA CLIPMATIC THREAD TRIMMER

THE RIGHT TABLES FOR YOUR CUTTING ROOM

CRA METAL SECTIONAL CUTTING TABLES

Illustrated Literature on Request

CRA

CUTTING ROOM APPLIANCES CORP.

1134 Broadway · New York 10, N. Y.

MUrray Hill 5-9144

Adelaide Mills

Anniston, Alabama

Our 60th Year

Spinners and Dyers of Fine Quality Yarns

Take it from Big League Knitters
Score more sales with 2 Big Hitters

TRIM YARNS

for cuffs, collars, foam backed fabrics, bottoms and trimming items of all descriptions.

PEDIGREE

for fine jersey fabrics, bathing suit fabrics, outerwear fabrics of all types.

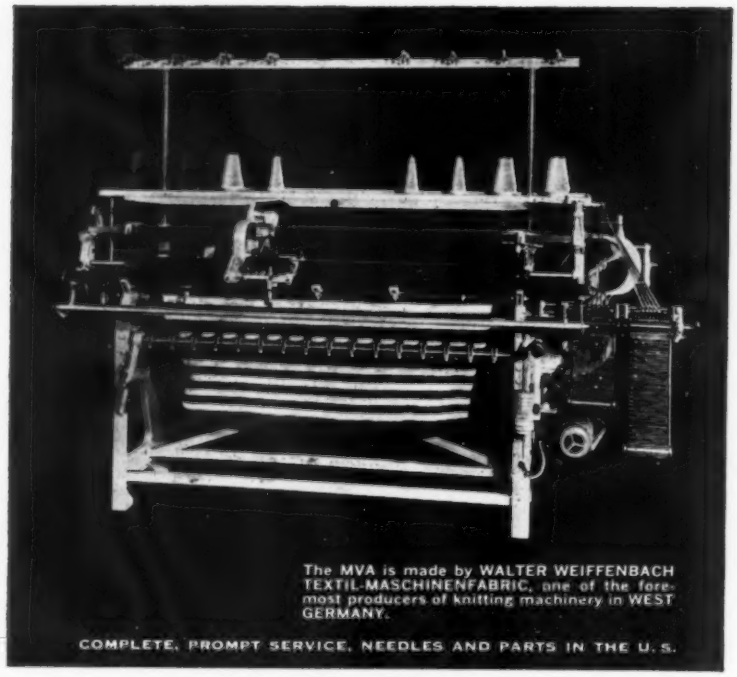
Trim Yarns and Pedigree Yarns are spun of the same exceptionally fine cotton—slow carded and spun in our plant. The latest type of spinning frames in the industry produce yarns in demand by the most discriminating knitters. Yarns are dyed in our plant by skilled technicians on the finest stainless steel equipment with electronic filters.

Available in Bleach, Direct, Sulphur, Developed, Vat and Naphtol colors.

Represented by BRANT YARNS, Inc. 1412 Broadway, New York 18 LOngacre 5-3350

The NEW MVA

Fully Automatic Power FLAT MACHINE



The MVA is made by WALTER WEIFFENBACH TEXTIL-MASCHINENFABRIC, one of the foremost producers of knitting machinery in WEST GERMANY.

COMPLETE, PROMPT SERVICE, NEEDLES AND PARTS IN THE U.S.

For Profit-Knitting Bulky Sweaters, Trimming And Fine Knits

Samples can be made by hand; no chain needed.

Contact Ideal Knitting Machinery Corp. for further details, prices and delivery.

- **AVAILABLE IN 3 TO 14 CUT 63" WIDTH**
- Precision Built For High Speed.
- Racking Over 1 x 1 or 2 x 2 Needles Automatically, At Will.
- Unlimited Stitch Design Possibilities.
- Knoppen, Tuck Patterns, Racking, etc.
- Changes Can Be Made On Either Side Of Machine.
- High And Low Butt Needles On Front And Back Of Machine.
- 63" Width — Available From 3 to 14 Cut.
- Simple Dual Short Chain Control System For All Automatic Motions.
- 5-Stitch Setting Positions On Front And Back Of Machine.
- Front Needle Bed Can Be Lowered.
- Attached Dual Speed Motor.
- Adjustable Take-Down Rollers.
- Rugged Construction For Durability And High Output.
- Moderate Price.
- Safety Devices:
  LOW VOLTAGE STOP MOTION. KNOT CATCHER. NEEDLE. DETECTOR. RED SIGNAL TROUBLE LIGHT ON STOP MOTION.

IDEAL KNITTING MACHINE CORP.

NOTE NEW ADDRESS

6 STANWIX STREET
BROOKLYN 6, N. Y.

Same Phone: HYacinth 1-3975

effect on a two-colored sweater also highlighted with a jeweled button.

One interesting cashmere sweater has short rolled sleeves. The nautical motif is popular in red, white and blue combinations. Lace and cashmere outfits utilize imported cotton lace in two-piece outfits with a dressy air. Lilac, beige, green, blue, apricot and gold are popular colors in this group.

Bonnie Briar also produces a group of fur blend sweaters of angora, lamb's wool and nylon.

Full-fashioned cashmere sweaters are shown in a myriad of styles, including the classics, semi-classics and dressmakers, in short, three-quarter and long-sleeved models in sizes 34-40. Some extra large sizes are shown going up to 46; 26 color choices are offered.

Among the more popular models are cardigans with notched collar interest, a tie neck pullover, a double-breasted cardigan and a long Chanel jacket.

Orlon bulkies are shown in both cardigan and pullover models. Ribbed interest highlights bright colors.

Bonnie Briar cashmere dress recently featured in window of leading Fifth Ave. store.

Three styles of doeskin hand-stitched skirts in dyes to match colors are offered along with the sweater line.

DYERS OF SWEATER WASTE

- WOOL
- WOOL GARNET
- SYNTHETIC

MODERN TECHNIQUES and EQUIPMENT
EFFICIENT — IMMEDIATE SERVICE

Send us samples of your clips

ECONOMY PROCESSING CORP.
150-152 CENTRE STREET BROOKLYN 31, N. Y.
TELEPHONES: ULster 2-0070 ULster 2-7745

B & R TEXTILE CORPORATION
LENOIR, N. C.
Quality Spinners of HI-BULK ORLON YARNS
3 DENIER – 6 DENIER – SINGLE AND PLY

REPRESENTED BY
THE TILLINGHAST-STILES COMPANY
SALES OFFICES
ROBERT G. POTTER
CHickering 4-4472
NEW YORK
BRANT YARNS, INC.
LOngacre 5-3350
PROVIDENCE: 1908 Industrial Bank Building DExter 1-9600
CHICAGO: 327 So. LaSalle St., WAbash 2-5323

Students – Today
Technicians – Tomorrow

Students who attend the world-famous textile schools are eager to learn the fundamentals of knitting. These technicians of tomorrow will soon see that the STOLL Flat Knitting Machines distinguish themselves as the leader in the industry.

Some of the most popular STOLL Machines for the American market for fancy collars and trimmings are:

TYPE AJUM—Double jacquard and transfer machine.

TYPE JBOM/b—Flat power machine with high and low butt needles, all changes left and right—combination cardigan and tubular locks.

TYPE KAMO/i—Jacquard border machine; greatest pattern possibilities for colored jacquard tuck designs as well as rib cardigan and tubular borders.

STOLL

Represented by

KNITTING MACHINE & SUPPLY CO.

SOLE AGENTS

U.S.A.
3710 HUDSON AVE.
UNION CITY, N. J.
WAlter 5-0606
UNion 4-1786

CANADA
2052 ST. CATHERINE ST. W.
MONTREAL, QUEBEC
WEllington 3-6442

SUCCESSOR TO GROSSER KNITTING MACHINE CO.

Ladies' And Misses'

College Knits Are Bright And Varied At Ayres Style Show In Indianapolis

INDIANAPOLIS, Ind. — L. S. Ayres & Co. department store displayed a variety of knits in its college style show in the store's large auditorium.

The show opened with a group of outfits called "Great Sweaters." Two young men came on stage with a girl on their shoulders wearing a wool and mohair bulky cardigan in yellow with a blending pleated plaid skirt.

McGregor's new popover sweater, blending olive and blue, was worn with tapered slacks in ancient olive corduroy. An imported bulky cardigan in marine blue was coupled with tapered continental grey flannel slacks.

Next was a Glamour magazine cover outfit—a gold mohair and brushed wool turtle neck with plaid pleated grey skirt.

A boatneck pullover in olive blended with slacks and shoes. An easy, fringed skirt in white and black had a long sleeve jersey top by Nelly DeGrab.

A bold black and white plaid stitched-down pleated skirt combined with a bulky patterned white turtle neck and a big pin on the sweater.

A green and white chanel cardigan was worn with a pleated skirt, cotton shirt, green brushed wool belt and gold chains and earrings.

Green was featured again in a bulky cardigan tied with a shoe string green leather belt, complimented by a hounds tooth check green and taupe box-pleated skirt. The outfit was a replica of one in Mademoiselle.

A slim skirt in vanilla and clove brown was shown with a coordinated jersey shirt. Also: a softly sashed sweater in green brushed wool and mohair topping a slim skirt in autumn sweet pea shades, with sweater trim in a darker shade and a look of gold lent by a pin and bracelets.

Premier's Kitten'gora slipover matched an unpressed pleated tweed skirt in the fashionable new plum tones. A pulldown bulky cardigan in Orlon with horizontal stripe and a collar blended with a forget-me-not plain blue slim wool skirt. A black leather tie belt and enamel blue bangle bracelet completed the costume.

In "Knees Have It!" an Old Colony bright, bulky, newly collared pullover was above plaid knickers, a navy blue pullover with two pockets and a V-neckline complimented a knee tickler skirt in green and navy plaid with pin and an Orlon shaggy sweater, checkerboard patterned in grey, was with a knee tickler skirt in grey wool, plus silver pin and bracelets.

In the group "Pants," an olive green novelty pullover sweater with a string tie at the neck and three-quarter sleeves, was teamed with olive and plum plaid pants and a doeskin parka with furry Orlon lining.

Vogue's green wide wale corduroy pants were worn with a tweed great colorful plaid pullover softly sashed.

A great ski sweater, imported from Denmark by White Staff, with a white background and

(*Continued on Page* 33)

FAWNTEX YARNS INC.

KNITTING YARNS

Woolen Spun

ORLON® ACRYLIC — FUR BLENDS — LAMB'S WOOL/ORLON — WOOL — MOHAIR BLENDS

300-322 BUTLER ST., B'KLYN 17, N. Y. • MAIN 5-2700, 1913

OUR NATURAL NYLON RIBBONS are excellent for TYCORA® and BAN-LON® SWEATERS in #3, #4 and #5 widths

CALL APEX FIRST FOR ALL YOUR RIBBON REQUIREMENTS

We carry the largest stock of ribbons for Knitwear ...your assurance of service when you need it.

NYLON
NYLON SATIN
ORLON
BELTING
GROSGRAIN
RIBBONS
PRE-SHRUNK

APEX RIBBON CO., Inc.
45 West 38th Street, New York 18, N. Y. WI 7-4737-0891
Selling Agents for
FEDERAL SILK MILLS
Manufacturers of Ribbons and Narrow Fabrics
WILLIAMSPORT, MD.

LET NICETOWN DYE YOUR ACRYLICS FOR SWEATERS

Acrylics accounted for 70 million pounds of knit-sweater yarn in 1959!

By the end of 1960, acrylics for knit sweaters, knit jersey, imitation furs, and other textile use, are expected to reach the annual rate of 160 million pounds—and thereafter grow at the rate of 20 million pounds annually for the next five years.

For best results for your acrylics come to Nicetown. Why? Because for over half a century Nicetown has dyed all types of animal fibres. In addition, it has dyed wool-like synthetics since their inception.

To make your synthetic yarn or piece goods have the appearance and loft of animal fibres, come to Nicetown.

Phone today to have a Nicetown field representative—all of whom have had actual dyehouse experience—call to discuss your acrylic or other yarn-dyeing needs.

NICETOWN DYE WORKS...

Orthodox & Belgrade Streets Philadelphia 37, Pa.

Pierre de St. Phalle, President
Ellen G. Wall, Vice President
Paul F. Beener, Treasurer
Harold L. Dungan, Secretary

JEfferson 5-4050 - 4051 - 4052

Ladies' & Misses'

College Knits At Ayres Show

(*Continued from Page* 31)

colorful trim contrasted with proportioned black flannel pants.

As seen in Glamour, Patti's grape tone mohair and wool drawstring sweater had a beige shawl collar, long sleeves, tapered two-neutral plaid pants, a tie belt and a fur hat.

A Huddlespun shaggy charcoal wool pullover in dark blue grey with a collar and a V-neck was worn with grey flannel pants under a gold and grey bold plaid car coat.

In "Overall Greats—Coats!" a tailored junior red wool jersey sheath dress was under a brilliant red chinchilla little overcoat.

A knitted sheath in "Dresses Shape Up For You!," had a drawstring sash and two circle pins at the neck. As seen in Mademoiselle, a Jerry Gilden little red jersey dress, sleeveless, excitingly blended with costume colored jewelry, was worn with short gloves.

A black easy knit sheath was highlighted with lots of fake fur —a leopard beret, sash belt and bag.

A number of Ayres' windows also featured college fashions. A brown jersey dress had white stripes above and below a string belt. Another gray sheath jersey dress, with a necklace neck elbow length sleeves was shown with a fur hat.

Black pants contrasted with a long-sleeve bulky sweater in white with a crew neck. Corduroy pants in white were topped by a white sweater with double collar, in cable stitch, and boat neck.

A beige brushed wool pullover sweater with high standup collar was teamed with beige plaid tapered pants. Diagonal plaid pants in olive green, blue and beige were combined with a long crew neck pullover with a string belt.

Corinne Chambers, Strawbridge Buyer, Quits

PHILADELPHIA, Pa.—Corinne Chambers has resigned as sportswear buyer at Strawbridge and Clothier after 14 years with the store. In addition to woven sportswear, Miss Chambers also bought sweaters and related knit accessories.

COLLINS & AIKMAN Yarns

ORLON,* WORSTED, NYLON, DYNEL,† ALPACA, MOHAIR AND BLENDS

COLLINS & AIKMAN

YARN DIVISION

210 Madison Avenue, N.Y. 16, N.Y.
MUrray Hill 9-3900
Lowell, Mass. GLenview 3-8161

Philadelphia, Pa.
Thomas A. Molyneux Inc.
GArfield 6-1698

Chicago, Ill.
David F. Swain & Co.
FRanklin 2-6246

New York, N.Y.
Kramer & Wolf, Inc.
MUrray Hill 4-2893

*DuPont T.M. †Union Carbide T.M.

"DC" *for bottoms, cuffs and novelty trimmings*

"DSC" *with independent high or low butt selection for novelty trimmings*

"DRC" *with independent high or low butt selection and stitch transfer. Novelty trimmings with lacy effects*

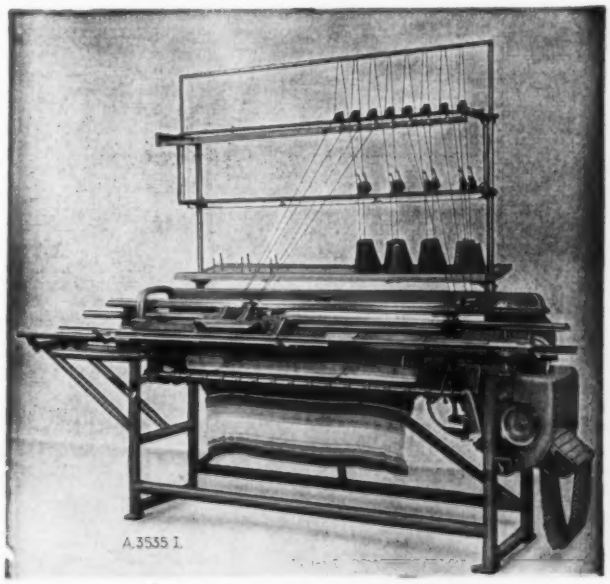
"BAN" *Jacquard and Rib Intarsia garments or collars*

"BARB" *for full fashioned collars, Jersey Intarsia sweaters*

"CAL" *for true cable stitch patterns, Links and Intarsia garments*

NOW AVAILABLE WIH 2 SPEED MOTOR

allowing the knitting of the slack course at reduced speed

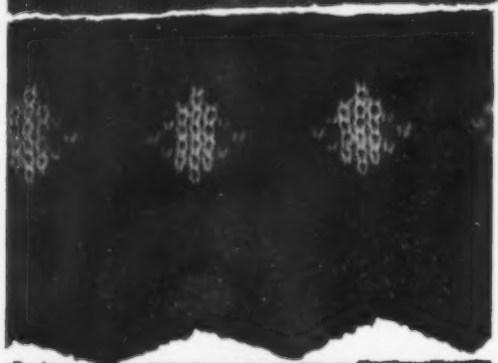


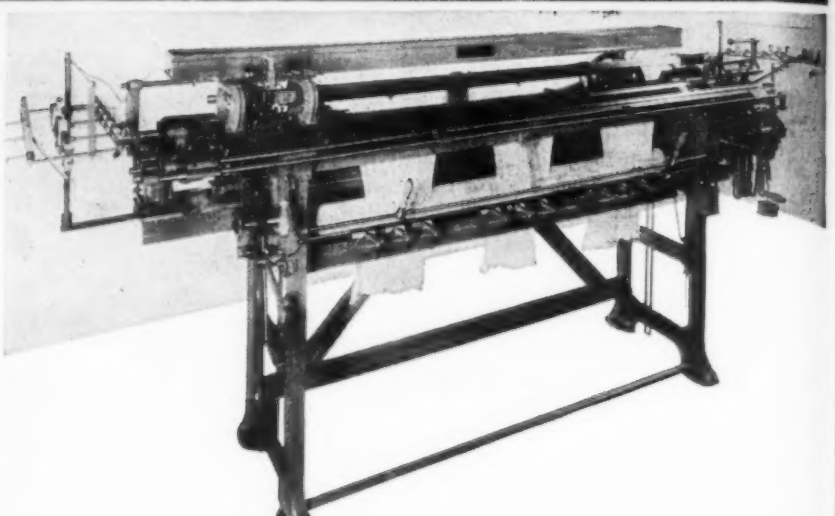
DUBIED

MACHINERY CO.

21-31 46th Ave., Long Island City 1, N. Y.
Ravenswood 9-6361

93 YEARS OF LEADERSHIP





QUEENS' New Model "BJ" Fully Automatic, Versatile, Flat Jacquard Trim Machine . . . Priced Amazingly Low!

Because the knitwear industry wants fancier collars and trims for full fashioned and cut and sewn knitwear, Queens has developed this advanced design machine for the production of multi-colored and fancy stitch patterns.

NOTES THESE IMPORTANT FEATURES:

- Available in 4 to 12 cut, inclusive with 60" needle bed.
- With all re-usable metal "cards" and snapper plugs.
- All functions of these machines without exception or limitation can be changed and controlled while the carriage is on either end of the machine further increasing the ability to produce decorative patterns.
- Pattern control is accomplished by steel links of various heights which are easily assembled into a long wearing chain avoiding the malfunctions common in less substantial or more complex systems. Two identical pattern chains are used in our time proven short chain arrangement which eliminates the need of extremely long pattern chains.
- High and low butt needles on front and back beds.
- Short carriage construction and more rigid mounting with anti-friction ball and roller bearings.
- The variable pitch "V" belt drive fully permits simple adjustment for maximum production and an automatic dual speed drive available as a low cost accessory further improves production by permitting maximum speed with automatic slow-down for only the more difficult to knit positions such as extremely loose slack or topping courses required by the full fashion trade.
- Drop lock type knitting cams of high grade Crucible Tool Steel.
- Four stitch settings.
- Four yarn bars.
- Jacquard may be controlled on either side of machine.
- Micro-switch actuating safety carriage drive to protect against excessive needle breakage.
- Choice of two fine fabric take-up systems.
- Exceptionally rigid base.
- Needle beds of top quality steel developed for us by metallurgists of one of the largest U. S. steel mills and accurately produced on the latest type of automatic equipment.
- Now with multiple rack up to 10 needles.
- High and low butt needles and high and low butt jacks in the front bed.
- Electrified production counter.
- Investigate the advantages of these and other "Queens" models today. We offer the industry's most complete line of flat knitting machinery. Your inquiries are invited.

QUEENS MACHINE CORPORATION

280 STARR STREET, BROOKLYN 37, N. Y. **EVergreen 6-0020**

MISS AMERICA 1961, Nancy Anne Fleming, is pictured above choosing her official "Ban-Lon" sweater which will be part of a specially designed wardrobe of Ban-Lon and Everglaze fashions accompanying the new Miss America throughout the United States during her year long reign. Miss Fleming, who comes from Montague, Michigan, chose as her favorite, the peter-pan collared sweater by Helen Harper Knitwear of Canada. This Ban-Lon sweater features columns of detail stitching on either side of the front. A total of eight sweaters received a special Gold Award for excellence in style, design and workmanship and will form a part of Miss Fleming's wardrobe. The designs range from the classic cardigan to a lace-trimmed sweater for dressier occasions. Following were the recipients of the Gold Award: Blairmoor Knitwear, Inc., Bobbie Brooks, Inc., Jane Irwill Knitwear, Inc., Pandora Knitwear, Inc. Rosanna Knitted Sportswear, Glenayr-Knit Ltd., Helen Harper Knitwear, and Paris Star.

THE "RELIABLE FELLOW" SAYS:
RELIABLE
YARN & TRIMMING CO., INC.
OVER
500
THREAD
COLORS
ALWAYS
IN STOCK
REMEMBER
TO CALL
RELIABLE
40/3 Sewing Thread . . . Nylon Sewing Thread . . . Nylon Separating Thread . . . Dacron Separating Thread . . . Soft & Merc. Ktg. Cotton . . . Kismet—Seam Binding . . . Pintickets — Labels — Tags . . . Elastic—Cleaning Fluid . . . Paper — Twine — Wax . . . Pressing & Cutting Supplies . . .
330-32 Bleecker St., B'klyn 37, N. Y. GLenmore 6-4434-4435

INTERSTATE

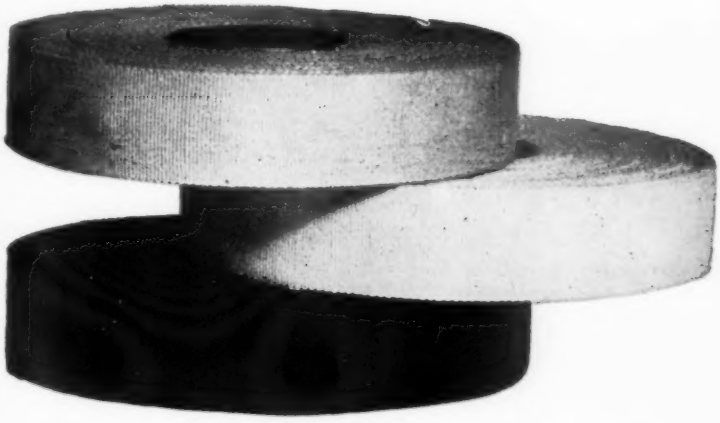
yarn mills, inc.

5725 HUDSON BOULEVARD

NORTH BERGEN, N. J.

N. Y. Phone: LO 4-3707

N. J. Phone: UN 5-3116



RIBBONS . . .

with a reputation!

FEATURING

- SPUN NYLON RIBBONS
  Ideally suited for Piece Dyeing of Textured Yarn sweaters
- ACENYL* RIBBONS
  (warp—filament Nylon; filler—spun acetate)
  A shrink-proof dyed Nylon ribbon ideally suited for synthetic sweaters
- COTTON AND RAYON RIBBONS (Pre-Shrunk)
  In several qualities

A tremendous assortment of colors and shades available for spot delivery in #3, #4, #5 widths

SPECIAL NOTE: We can custom dye ribbons to your specific color requirements. Call, write or wire for information and prices.

J. BURLOCK COMPANY

19 WEST 24th ST., NEW YORK 10, N. Y. ORegon 5-7705

Selling Agents for THE POST NARROW FABRICS CORP., Andover, Conn.

*Registered Trade Mark #614506

• COLLARS
• CUFFS
• BOTTOMS
• SLEEVES
• ELASTICS
• BORDERS

KNIT TRIMS

Satisfaction Guaranteed

CAPITOL
KNITTING MILLS of Phila., Inc.
Westmoreland & Collins Street
Phila. 34, Pa. GArfield 3-0376

CROSS
... the finest cotton knitting yarn

DOUBLE CARDED OR COMBED

CROSS COTTON MILLS CO. MARION, N.C.

BLEACHED OR DYED

Cross Cotton Mills Company
MARION • NORTH CAROLINA

Warp Knitting Trade History

(*Continued from Page* 13)

conjunction with plastics, such as the new Scott Foam bonded fabrics for which a knitted base is eminently suitable. During World War II Courtaulds made tricot fabrics which was coated with a thin layer of rubber. Even a development such as Scott Foam, however, cannot reach the enormous bulk involved in say, weaving cotton shirting, but it may be well able to tax the existing capacity of warp knit machinery.

A combination of a new yarn and a suitable finish is excellently illustrated by this tricot slip made from Du Pont Satinette nylon.

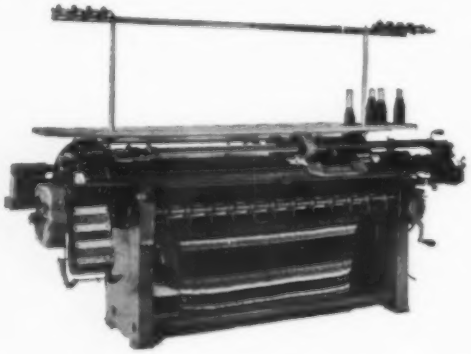
The new yarns can provide additional fields such as that announced by makers of Ban-Lon. Here the fabrics are designed for dresses, blouses, sport shirts, and other outerwear.

Although carpets are being made by new methods I still feel the warp knit machine could compete. This is a suitable point to enlarge upon the effects made by FNF in this field. We built a 14 gauge machine using knitting warps, a pile, filling warps, and a jute welt insertion. The machine was about 30 inches wide but could be made any width. It can at 400 picks a minute and was potentially faster. It is thoroughly described in various patents. In common with other warp knit carpet machines it could not make fancy designs. However, there are signs that methods are being evolved for spray decorating carpet structures and this whole field might merit further study.

A very important review of carpet techniques was published in Oil-Power, the Socony Mobil Oil Company, Inc. (Volume 59, Number 4) this year. It would be interesting to know why an oil company is so interested in carpet techniques. Is it from the point of view of just machine lubrication, or is there some pending chemical or other development in the background which we should know about? At any rate, this review is well worth studying.

It seems in the carpet technique the main cost is in the pounds of wool or pile per

(*Continued on Next Page*)



MODEL F8
ALEMANNIA—SEYFERT & DONNER WEST

The only single lock flat power machine with 71" NEEDLE BEDS
63" Needle Beds also available

Additional needle space for more economical production of trimmings and garments.
Built in 3-14 cut.
MODERN — VERSATILE — EASY TO HANDLE
Ask for demonstration.

SERVICE AND PARTS
FOR NEW MODELS
AND ALL MACHINES
PREVIOUSLY DELIVERED BY US

Sole distributors for U.S.A. and Canada
TRICOMA, INC.
7504 Empire State Bldg., New York 1, N. Y.
Wisconsin 7-7466-7
Showroom and Workshop: 303 Stockholm Street
Brooklyn 37, N. Y. GLenmore 6-0205

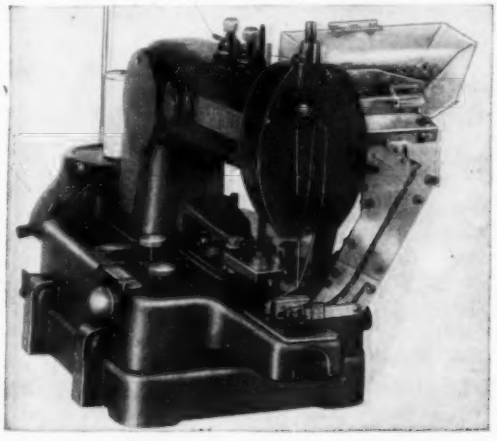
square yard. Even on slow machines the conversion cost is a small proportion of the whole. It is known that Mohawk had built carpet Raschel machines about 200 inches wide and it would be interesting to know how the economics of this worked out. There was, of course, no weft insertion involved.

It is unfortunate that the development of synthetic fur fabrics occurred on circular knitting machines and one wonders whether the warp knit structure might not merit study for pile fabrics knitted from sheets of fibres by piercing it with pointed needles. This is not a new idea but a tubular needle, for instance, would be very suitable for this purpose.

There is a dependence upon the fabric finish in this new development which should encourage us to look again at all the fabric treatments available to us, such as, coating, crease, resistance, thermal deformation or embossing, printing, spraying, and the like. For instance, this tie is warp knitted with a sprayed metallized design. Showing a piece of apparel like a tie also serves to remind us that there may be other garments which could be considered, such as a Japanese thong toe slipper of which we have a sample. It is appreciated this may be a small example but it may cause us to look again at what could be made by warp knitting.

In March, 1959, a very interesting review of the encroachment of warp knitting on other textile industry by D. F. Paling was published by the Hosiery Trade Journal. This article covers lace and edgings, sheets, shirting, outerwear fabrics, elastic fabrics, and a list of at least 10 types of fabric demands not discussed. A study of this article is recommended for it is fairly exhaustive and as most of you will have access to it, there is no need to spend time on it now.

For instance, the new pile fabric circular machines with a cut pile being offered by a few of the main machine builders in the world are claimed to produce 10 yards per feed (10 to 20 feeds) per eight hour day with 7 needles per inch, i.e. 100 to 200 yards. A warp knitting machine could produce at 500 r.p.m. on a similar gauge about 700 yards per 2 hours.



FAST!!!

FULLY AUTOMATIC

- Completely Automatic
- Single pedal operation
- Experienced operators Not Required
- 1500 RPM — FAST!

The *NEW SPEEDY* **CHANDLER**

With automatic button feeder, can double your production . . . complete a garment in seconds!

Call or Write now for complete information.

CHANDLER SALES & SERVICE
245 Seventh Ave., New York, N. Y.
WATkins 9-0646

"Orlon Sayelle"®!

acrylic fiber

Get the facts *before* you act

Your entire success of Orlon Sayelle sweater production depends greatly on the skills of your dyer. We, at Dyecraftsmen, have mastered all the problems of dyeing these elegant new yarns . . . so that the colors are exactly in the wanted shades . . . so that they retain their resiliency . . . their high loft.

Whether it is ORLON SAYELLE, CRESLAN, TEXTURED NYLON or any SYNTHETIC in blends or novelties you can rely on Dyecraftsmen to deliver on schedule the high fashion colors in clear, vibrant tones that beguile the eye and motivate buying.

Dyecraftsmen's highly-skilled know-how, modern equipment, and reliability assure you quality results.

SPECIAL OFFER

To prove that there is a tremendous difference in the dyeing of Orlon Sayelle, we will gladly dye a sample lot so that you may compare results. Is COLOR your problem? Come to the masters.

color magic

DYECRAFTSMEN, INC.

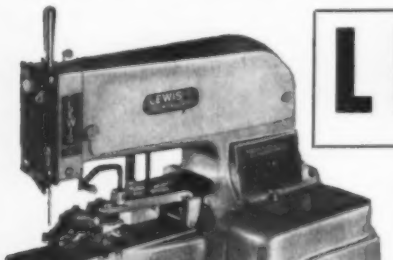
Master skein dyers and bleachers

349 Lincoln Street, Hingham, Massachusetts

Riverview 9-1141, 1142

it's NEW!

it's DIFFERENT!



LEWIS
BUTTON SEWER

IT'S FASTEST
— Fully 1500 rpm

IT COSTS LESS TO USE
— Engineered to deliver fast, smooth, quiet operation over the years with little sign of stress or strain from daily use.

Compare the Lewis with Your Present Machine... Or Any Other.
SEE YOUR REGULAR LEWIS AGENT

— Product of —
Union Special MACHINE COMPANY, CHICAGO 10
NEW YORK OFFICE FOR LEWIS MACHINES
315 West 35th Street, New York 1 — CHickering 4-8800

Now . . . Cut Costs and Step-up Production with these EFFICIENCY Labor-Saving Devices

"SWEATER PRESSING ATTACHMENT"
Check these exclusive advantages:
- Speeds up frame pressing
- Eliminates handling of pressing frames
- Can be adjusted to overcome pressure marks on Orlon sweaters
- No installation required

"PRESSING FRAMES"
for better-looking and accurately sized FULL FASHIONED and cut-and-sewn sweaters and knitted skirts.

SKYLINE STEAM SIZING ATTACHMENT*
for faster production and more uniform steaming of circular knit sections.

. . . and Sateen and Nylon Steam table covers and pads . . . OHAUS textile scales . . . Steam Tables and Pressing Machines.

* Patented

Designers and Manufacturers of Production Equipment for the Knit Goods Industry

EFFICIENCY DEVICES
262 Greene Ave., Bklyn. 38, N. Y. NEvins 8-6984

Tailor-Made Orlon Fibers

(*Continued from Page 7*)

This behavior can be seen from application of the Busse pellet demonstration, in which a fiber mass is compacted under heat and pressure and then treated with steam. Whereas wool bulks up after being pressed and then steamed, conventional acrylic fiber does not recover its bulk. The two-component fiber actually fluffs up to the same degree as wool. From the practical viewpoint this means that dark colored fabric of Orlon Sayelle will not have a glazed appearance after pressing and steaming.

The bilateral acrylic fiber represents a basically new kind of acrylic fiber. The crimp properties of this fiber reflect themselves during finishing so that fabrics with wool-like aesthetics, elasticity, loft, and resistance to permanent heat deformation can be obtained. This new product provides a new degree of freedom in the finishing of aesthetically pleasing fabrics from the growing family of Orlon fibers.

The last fiber in the luxury class is another new product, Orlon Type 28 staple, which is just in initial small-scale production. This product, because of its difference in frictional properties from the conventional Orlon staple, having a very low static coefficient of friction, provides a slick, soft handle to fabrics even though its fiber denier is rather large. As a matter of fact, the very low coefficient of friction of this product is maintained during use, even after dry cleaning or laundering. This new product can be used to give new styled effects in sweaters of Orlon Sayelle. For example, brushed sweaters of such blends have a bright, shaggy mohair-like appearance. New aesthetics are also obtained from woven fabrics containing this product.

The key new properties which have been built into the luxury family of fibers, then, are continuous fibers for silk-like effects, permanent reversible spiral crimp for fine merino-like fabrics, and durable surface slickness for improved handle.

REFERENCES

Ref. 1—Du Pont Textile Fibers Technical Information Bulletin No. OR-101—Processing "Orlon" Acrylic Tow on the Turbo Stapler and Related Equipment—January 1960

Ref. 2—Du Pont Textile Fibers Technical Information Bulletin No. OR-90—High Bulk Yarns of "Orlon" Acrylic Fiber for Knitting—May 1958

Ref. 3—Horio, M. and Kondo, T. —Textile Research Journal *23* 373 (1953)

Ref. 4—R. B. Taylor, R. L. Tichenor, J. F. Ryan, E. M. Hicks, Jr.—Reversible Crimp in an Acrylic Fiber —Textile Research Institute Meeting, New York City—March 24, 1960

Dow Lifts Prices Of Lurex Yarns

The Dow Chemical Company announced increases in the prices of certain types of Lurex metallic yarns.

Effective October 1, 150 Mylar foil gold and silver will increase by 55 cents a pound, 150 Mylar foil solid colors by 25 cents a pound, 150 metalized Mylar gold and silver by 35 cents a pound, 100 metalized Mylar gold and silver and 100-C-metalized Mylar by 45 cents a pound.

HIGHEST PRICES PAID
FOR YOUR
Sweater Waste

G & N WOOL CLIPS
Cable Address: Genclips, N. Y. Out of Town: Call Collect
55-17 FLUSHING AVE., MASPETH 78, N. Y.
EVergreen 6-0022

Equipment Firms

Ceremonies Open Scott & Williams Plant in Belgium

BRUGES, Belgium—A new Scott & Williams circular knitting machine plant was dedicated here in a ceremony attended by Belgian and U. S. government and industry officials.

The new building, a prestressed concrete structure of 56,000 square feet, is Scott & Williams S.A., a wholly owned subsidiary of Scott & Williams, Inc., of Laconia, N.H., the oldest U.S. manufacturer of circular knitting machines.

The ceremonies were opened by the raising of the flags of the two nations and a blessing by Msgr. De Smeth, Bishop of Bruges. Among the speakers were R. Holtkamp, of the Belgian Ministry of Economic Affairs; William S. M. Burden, of the U.S. Embassy in Brussels; Pierre Vandamme, mayor of Bruges; and Richard H. Whitehead, president of Scott & Williams, Inc.

The audience was shown a film, "There is Magic in Seam-Free Nylons" and conducted through the plant to examine the hosiery and fabric machines.

Scott & Williams S.A. will be the headquarters for the production, sale and service of circular knitting machines and replacement parts for the common European market and for England, Austria, Spain and the Scandinavian countries.

A group of Belgians have been trained at the U.S. plant in the manufacturing, assembling and testing of circular knitting machines for the production of ladies' seam free nylon hose. The first machines were recently shipped from the Bruges plant.

Scott & Williams, Inc. was founded in Philadelphia in 1865. It is the largest manufacturing industry in central New Hampshire and employs 2,000.

Its products include single feed and two feed seam free hose machines. The single feed features an automatic tensioning device and multi-blade yarn trimmer.

S. A. Cooper New Head Of Geo. W. Hepworth Co.

PHILADELPHIA, Pa.—Samuel A. Cooper has been named president of George W. Hepworth & Co., Inc., and its associated companies, Merion Combing Co. and Nypel Corp., West Conshohocken, Pa.

The Hepworth and Merion companies produce nylon spun yarns, and Nypel makes nylon molding powder for the plastics molding industry.

Mr. Cooper, who succeeds George W. Hepworth, had been general sales manager-fibers of the National Aniline Division of Allied Chemical Corp. Mr. Hepworth continues as board chairman.

Named By Singer Sewing

Melvin A. Atherton has been appointed sales representative for the Singer Sewing Machine Company's industrial sales department. He will sell industrial sewing machines and allied equipment in northeastern Massachusetts and Maine from his office in Needham, Mass.

Edward W. Wigley has been appointed branch manager of the company's industrial sales office in Winnipeg, Manitoba.

● LATCH NEEDLES for UNDERWEAR
OUTERWEAR • SEAMLESS HOSIERY

GEORGE VENESS
222 W. Adams St.
Chicago 6, Ill.

NEEDLE SALES CORP.
3710 Hudson Avenue
Union City, N. J.
Phone: YUkon 6-8727

CHARLES B. PAULUS
6655 McCallum St.
Philadelphia 19, Pa.

GEORGE C. GRAVES, III
P.O. Box 36, Hickory, N.C.

KENNETH R. LINGLEY
769 Hanover St., Hanover Center, Mass.

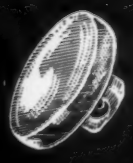
BRUCE LAUDERBACH
1841 Hickory Valley Rd.
Chattanooga, Tenn.

WESTERN TEXTILE HAND PRINTS
555 N. Windsor Blvd.
Los Angeles, Cal.

STOCKROOMS
1841 Hickory Valley Road, Chattanooga, Tenn.
1157 11th St. Circle, N.W., Hickory, N.C.

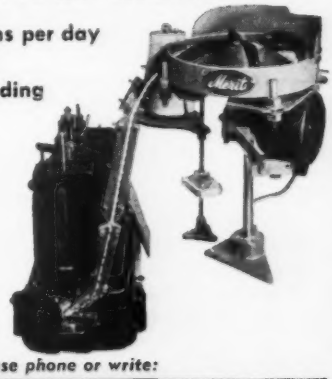
LACONIA COOPER Sales Corp.
3710 Hudson Avenue
Union City, N. J.
Phone OXford 5-3388

THE FAMOUS
Merit®
AUTOMATIC
SHANK BUTTON FEEDER



SAVES TIME—SAVES MONEY

- Feeds up to 120,000 buttons per day
- Fits any sewing machine
- Quiet and vibrationless feeding
- Eliminates button scuffing
- Processes shank buttons of different styles & sizes
- Motorized for added efficiency
- Available with our sparkling Polyester GEMPEARLS®



For samples & nearest distributor, please phone or write:

MERIT PLASTICS
30 Lincoln Place • Lynbrook, New York
LYnbrook 9-8508

CALL US AT PENNELL

FOR TOP PRICES ON
MEN'S AND BOYS'
- SWEATERS
- SWIM TRUNKS
- POLO SHIRTS
- WALK SHORTS

WE'RE ALWAYS OPEN TO BUY
..WE ALWAYS BUY FAIR!

Pennell Sportswear Co., 1384 Broadway, New York 18 • LA 4-9020

THE INDUSTRY'S MARKET PLACE

Advertising rates: $5.50 per column inch per insertion. Positions Wanted: $5.00 per colunm inch per insertion. Minimum space — 2 inches. Ads for Monday's paper must be in by preceding Wednesday, 2 P.M. Please enclose payment with your order.

MILL EQUIPMENT, MACHINERY WANTED, FOR SALE

FOR SALE – CASH OR TERMS

1—Jacquard TAI, 30″, 14¼ cut, 12 feed, 4 color stripers on each feed, set on pique stitch
2—Jacquard TAI, 30″, 10 cut, 12 feed, 4 color stripers
2—Scott & Wms. Int., 32 feed, 17 and 18½ cut, practically new
2—Jacquard TAI, 30″, 16½ cut, 12 feed, with 4 color stripers on each feed
7—Leighton transfers, 14 cut, 13″, 15″, 16″, 17″ (3), 18″, 4 feeds each, some have extra 9, 10 and 10½ cut cyl. & dials
3—Jacquard TA machines, 8 and 10 cut; 1-12″, 1-15″ and 1-17″; 4 feeds each
1—Jacquard LH, 9 cut, 30″, 6 feed, with 3 color stripers
1—Wilcox & Gibbs label sewer for bulkies, stand and motor
2—Wilcox & Gibbs label sewers, stands and motors
1—68″, 1-76″, 1-78″ 7 cut Roba. double jack machines
1—Kastrinsky Calendar, 54″, latest type, with trolley and double steam box front and back

BEN WACHSMAN & CO.
Consultant for Appraisals and Liquidations
671 Bushwick Ave., Brooklyu 21, N. Y. GL 2-4936

BEST JK BUYS

1—Supreme BRW, 4 cut, 16 feed
3—Philip Mach., 32 feed, 30″, 14, 14½ & 18 cut
2—Scott & Williams interlock, 32 feed, 14½ & 18½ cut, 30″
2—Phila. Jacq. TJI, 14¼ cut, 30″, 12 feed, Jacq. automats
4—Phila. Jacq. TAI, 8¾, 13, 15, 16½ cut, 30″, 12 feed, 4 col. strip.
1—Phila. Jacq. TJ, 10 cut, 30″ 12 feed, 4 color strip., automats.
3—Phila. Jacq. TJ, 6, 7 & 8 cut, 28″, 6 feed, 4 col. strip.
4—Phila. Jacq. LH, 6, 7 & 8 cut, 30″ & 28″, 6 feed
1—O.G., 32″, 36 feed, 8 cut, multi-feed jersey and 1 x 1 rib
2—Phila. Jacq. LA 30″, 12 feed, 7 & 10 cut, 3 col. str.
2—Leighton transfers, 6½ & 10 cut, 32″ & 34″, 9 feed, 4 col. str.
8—Phila. Jacq. TA, 11″ to 20″, 4 feed, 6 to 12 cut
1—Phila. Jacq. TA, 30″, 10 cut, 12 feed, 4 col. str., extra cyl. & dials.
1—Phila. Jacq. MLW, 28″, 11 cut, 24 feed, automats & wheels
4—Wildman PB2, 15″, 17″, 18″, 28″, 8 and 10 cut
2—Queens Model "B", 60″, 9 & 12 cut, High & Low needles, Jacks
2—Lamb double head border machines, 7 & 8 cut, with motors
2—Supreme flats, 44″, 7 cut, high & low butt
1—Dubied BAN, 56″, 12 cut, Jacquards front & back
1—Supreme flat mach., 5 cut, 36″
1—Universal border mach., 12 cut, 24″, like new
2—Universal flat mach., 62″, 10 & 12 cut

Joseph Kopelowitz, Inc.
APPRAISALS — LIQUIDATIONS — FINANCING
600 Broadway, Brooklyn 6, N. Y. EVergreen 7-1145
Cable: Josko Inc., New York

FOR SALE

3—Burlington S.S. pkge. dye mach., 300 lb. cap.
4—Supreme jersey, 18″, 18 cut, 24 fd., patt. wheels
1—Brinton 24″, 20 cut, 64 feed
3—Brinton 24″, 18 cut, 64 feed
6—Wildman interlock, 26″, 24 x 24 cut, 24 feed
1—Morat, 30″, 24 feed, 16 cut
1—Brinton PR 19, 24″, 10 cut, 16 feed
4—Jacquard TAI machines, 30″, 13½ cut, 12 feed
2—Jacquard LH machines, 30″ 7 cut, 6 feed
2—Jacquard TJI mach. 14¼ cut, 30″, 12 fd., with 4 col. str.

SPEIZMAN KNITTING MACHINE CORP.
Main Office
508 W. 5th ST., CHARLOTTE, N. C.
Phone ED 4-5546
N. Y. C. Office
350 5th AVE., NEW YORK 1, N. Y.
Phone PE 6-0451

WANTED – HAND MACHINES

Flat V bed high and low butt, 4, 10 and 14 cut.
8 or 10 cut Links machines.
Hand Jacquard machines.

BOX 380E

everybody knows AINSLE
FLAT KNITTING MACHINES
NEW and REBUILT
• BORDER & POCKET MACHINES • NEEDLEBEDS • BRUSHING MACHINES
• TUBING MACHINES • BRAIDERS • WARP KNITTERS
• CIRCULAR KNITTERS • WINDERS • LATCH NEEDLES & SUPPLIES
OVER 50 YEARS OF FAIR DEALING LET US QUOTE YOU!
AINSLIE is on the level
AINSLIE KNITTING MACHINE CO
740-750 Grand St., Brklyn 11 N.Y. EV 7-5[illegible]

WANTED

7 OR 8 CUT CYLINDER

for Supreme 24″ and/or 26″ machine.

BOX 390F

WANTED

6, 7 or 8 cut BARB machines.
State price and serial number in your reply.

BOX 397

WANTED

TAI Jacquard machine.
Write stating cut, serial number and price.

BOX 390D

FOR SALE

3 Stafford and Holt Rotary Jacquard Machines 30 or 32 inch. 7 gauge, short chain system, heavy rollers, 18 end Wesco Stop Motion, with motors. Can be seen in operation.

BOX 395

CONTRACT WORK, CONTRACTORS WANTED

CONTRACT WORK WANTED

on 4 cut, 71" Tricoma machines.
We have opening for an additional 200 dozen ladies' novelty bulkies per week.
Good quality. Reasonable.

BOX 390G

CONTRACT WORK WANTED

on men's interlock Ban-Lon shirts.

BOX 370

WANTED

MILL TO MAKE LADIES' CLASSIC INTERLOCK BAN-LON SWEATERS

Jobber has large order for a good mill who can make quality ladies' Ban-Lon interlock classics at reasonable prices. Reply immediately.

BOX 389

CONTRACT WORK WANTED ON FULL FASHIONED 21 GAUGE MACHINES

fur blends, Ban-Lon, Orlon, Creslan and all other yarns. Ladies' classics and novelties. Men's shirts. Equipped to make many various styles.

BOX 384

CONTRACTOR WANTED

for knitted fabric and sweaters
on 5, 6 or 7 cut circular
Links machines.

BOX 398

CONTRACT WORK WANTED

on 14 cut, 26" New Supreme's ROF-RO. Plated and regular loop machines. LOCATION IN MIDWEST.

BOX 387

WANTED

MILL TO MAKE BULKIES

Top notch jobber has year-'round work for a reliable mill with substantial Bulky production on 4 cut flat machines. This is a very unusual opportunity for the right mill.

BOX 382

RELIABLE CONTRACTOR

with 7 gauge LH Links & Links Jacquard machines seeks additional work on men's and ladies' sweaters and knitted suits. Quality workmanship. Large production.

A. NUSSBAUM KNITTING MILLS

144 Spencer St., Brooklyn 5, N. Y. MAin 4-8388

CONTRACT WORK WANTED

on 4 cut flat machines. Complete garment or knitting only.

BOX 394

YARNS WANTED, FOR SALE

NEW YARN OFFERINGS!

AT ATTRACTIVE PRICES

2,000 lbs.—1/20, natural, 100% worsted, 64s quality, cones
400 lbs.—4.4 run, lt. oxford, 75% wool, 25% Orlon acrylic, cones
1,000 lbs.—3 run, olive green, 100% wool, cones
700 lbs.—1/24, lt. oxford, H.B. Orlon acrylic, cones
1,000 lbs.—1/23, oatmeal, brown & lt. brown, H.B. Orlon acrylic, cones
500 lbs.—1/15, black, Orlon acrylic, 10 denier, cones
400 lbs.—1/30, natural, Orlon acrylic, cones
500 lbs.—1/24, pink, H.B. Orlon acrylic, cones
400 lbs.—1/26, natural, H.B. Orlon acrylic, cones
1,000 lbs.—2/20, asst. colors, 100% worsted, cones
800 lbs.—5¼ run, natural, Orlon acrylic, cones
4,000 lbs.—2¼ run, brass, 75% wool, 25% Orlon acrylic, cones
750 lbs.—1/16, natural, H.B. Orlon acrylic, cones
500 lbs.—3 run, tangerine, 80% wool, 20% Orlon acrylic, cones
1,000 lbs.—3½ run, lt. blue, 96% wool, 4% nylon, cones
2,800 lbs.—2¾ run, lt. oxford, 100% wool, cones
4,000 lbs.—2/8, natural, 88% wool, 12% fur, cones
3,500 lbs.—2¼ run, lt. biege, 75% wool, 25% Orlon acrylic, cones

SAM SASKEN — CH 4-8733

1441 Broadway, New York 18, N. Y.

YARNS FOR SALE - At Reasonable Prices

1650 lbs.—3200 yds., loop yarns, white, peacock, ginger, black, cones
1750 lbs.—9/1, 15/1, 1/32, 50/2, 60/2, black, Orlon acrylic and Acrilan acrylic, cones
400 lbs.—2/27, maize, 100% Darvan nytril, cones
275 lbs.—1/26 char. grey Turbo Orlon acrylic, cones
400 lbs.—1/32, lt. heather, 55% Orlon, 45% Arnel, cones
2200 lbs.—3 run, 3.5 run, 5 run, lamb's wool and Orlon acrylic, cones
600 lbs.—1¾ dk. brown, 2⅝ red, 100% Wool Shetland, cones
850 lbs.—2/14, 75% Wool, 25% Nylon, black, cones
700 lbs.—1⅞ run, loden green, gold, wool and nylon, cones
1500 lbs.—1¾ and 2¾, camel, 75% wool, 22% mohair and 3% nylon

BRITE YARNS CORP.

191 Broadway, Brooklyn 11, N. Y. EVergreen 7-1525

FOR SALE

2/20 worsted yarn on cones — 600 lbs. blue heather — 600 lbs. rust heather 300 lbs. green heather — Guaranteed first quality. Much below market price.

CENTURY YARN CO.

686 Flushing Ave., Brooklyn, N. Y. EV. 8-8277

FOR SALE

ELASTIC YARN FOR KNITTING

● All Sizes and Colors

BEDFORD YARN CO.
79 Clifton Place
Brooklyn, N. Y.
MAin 2-1340

WE BUY SURPLUS KNITTING YARN

Machine and Hand Knitting Sizes

WALTER McCOOK & SON, INC.

711 Arch St. Phila. 6, Pa. WAlnut 5-8891

NEED CASH FAST?

YARN CLOSEOUTS WANTED

Ban-Lon and Orlon Acrylic Small or Large Lots

RIDGEWOOD YARN

EV. 2-8002

ORLON YARNS FOR SALE—Original Cases

800 lbs.—2/25, 100% Orlon acrylic, assorted colors, cones. New England Spun Silk.

YARN EXCHANGE

358 5th Ave., New York 1, N.Y.

HELP WANTED

MECHANIC WANTED

First class. Experienced on TJI and Links machines. Must reside in New York area. Company benefits. Write:

BOX 260K

DESIGNER & STYLIST: KNITTED FABRICS

We seek the best man or woman in the business who can develop and style a dynamic line of circular knit fabrics. Must have creative styling ability, technical know-how for the ultimate in knitting machines, with exceptional color sense. Unusual opportunity for long range lucrative proposition, with a large, diversified eastern knitting mill. Write full history with references and salary required in first letter for appointment.

BOX 392

SWEATER DESIGNER AND PRODUCTION MAN

wanted by top sportswear house.

Top salary.

BOX 380

PRODUCTION ASSISTANT WANTED
Some knowledge inventory control and yarns.
Excellent opportunity. Good salary.
BOX 396

WANTED — KNITTING SUPERINTENDENT

Must be creative stylist on circular knit ingrain and plain fabrics of all constructions. Assume complete responsibility for large knitting production. Southeastern location. Salary open.

BOX 390B

MECHANIC WANTED

Can use only top man
experienced on TJI and TAI
machines.

BOX 390C

WANTED: MANAGER
for full fashioned knitting mill
Must be able to supervise from yarn to box. A real opportunity in an expanding mill for a man with drive. Must be willing to locate in northern N. J. State salary expected and experience in first letter. All replies will be strictly confidential.
BOX 390A

KNITTER-MECHANIC WANTED
Young. For Supreme Pattern Wheel. Capable of making own patterns. Small knitted fabric mill. Opportunity for right man to "buy in" as a partner.
BOX 390E

WANTED — KNITTER MECHANIC

Experienced on Leighton transfers, Ordnance Gauge machines and LH-6 circular links machines.
Qualified person has opportunity in this position for upgrading to general plant superintendent. Should therefore have general mill production experience as well as knitter mechanical ability.

BOX 399

POSITIONS WANTED

EXPERIENCED CUTTER AVAILABLE
for all types of knitwear. Full time or part time.
GEdney 8-4570

KNITWEAR PRODUCTION MANAGER
DESIRES CHANGE
Ladies' and men's sweaters. Capable of taking complete charge of knitting mill. Proven record of integrity. Wide knowledge of styling. Full fashioned, cut-and-sewn, bulkies. 18 years in knitwear field. American and European experience.
BOX 390J

POSITION WANTED
Executive with thorough background of every phase of knitwear manufacture. 25 years experience. Presently in control of substantial operation better sweaters, yarn purchases, production and sales coordination, styling and merchandising. Well established with resources and top contractors. Available October 1st, 1960.
BOX 390

CLOSE-OUTS WANTED

CLOSE-OUTS WANTED
CASH PAID for surplus stocks of Sweaters and Bathing Suits.
BERNETTE TEXTILE COMPANY
101 W. 31 St., New York City BRyant 9-5526-7

WANTED FOR CASH
Men's and Boys' **SWIM TRUNKS, SWEATERS, POLO SHIRTS**
LOUIS SOMERFIELD 1140 B'way, New York 1, N. Y.
MUrray Hill 3-7856

COTTON KNIT FABRICS WANTED
We pay cash for closeouts. Stripes, fancies, solids, underwear materials, etc. Full pieces and remnants. Also interested in knitted synthetics and woven fabrics.
HUB OVERSEAS CO., INC.
394 Broadway, New York 13, N. Y. WOrth 6-5544

KNIT CLOSE-OUTS WANTED
Top prices for solids, stripes and fancies.
S. LEVINE AND SONS
639 N. 2nd St., Allentown, Pa., HEmlock 5-3578

COTTON KNIT FABRICS WANTED
Top prices paid for your close-outs and sample pieces.
BARTON MILLS
P.O. Box 271 Nazareth, Pa.

REAL ESTATE

LOFT FOR RENT
627 Broadway, New York City. 10,000 square feet, 50' x 200'. Formerly occupied by circular knitter, can be used on 24 hour day. Sprinklers, low fire insurance rate, wood floor, all means of transportation available.
Call Mr. B. Fishel — GR. 7-3164

FOR BEST RESULTS
ADVERTISE IN THE
"MARKETPLACE" SECTION

ATT: MFRS. AND CONTRACTORS

Leading knit goods firm wishes
to institute long-range program—
starting early in December—
to buy large quantities of

LADIES' BAN-LON AND ORLON

INTERLOCK CLASSICS

Quality goods only—
required at reasonable cost

WILL ALSO CONSIDER WORKING
WITH RELIABLE CONTRACTORS

Reply Immediately

BOX 390M

SUBSCRIPTION ORDER FORM

Fill in coupon and return TODAY

KNITTED OUTERWEAR TIMES
386 Park Ave. South, New York 16, N. Y.

Please enter our subscription to the Knitted Outerwear Times for one year. Check is enclosed. Domestic — $10.00 per year; Canada-Foreign — $15.00 per year.

Name.....

Address.....

.....

TRADE WANTS

RATES: one insertion—35 cents per word. Words set completely in capitals — 40 cents per word. Box numbers count as two words. Minimum cost of advertisement—$5.50. Minimum cost of Positions Wanted advertisements — $5.00. Trade Wants for Monday's paper must be in by preceding Wednesday, 2 P.M. Please enclose payment with your order.

LEASE—SALE. LOFTS—BUILDINGS. ALL SIZES—ALL LOCATIONS. MILTON WOLF & CO., 744 BROAD STREET, NEWARK, NEW JERSEY. MI. 3-8844.

For Sale: Large, diversified sweater mill in metropolitan New York area, coarse and fine gauge equipment, excellent labor area. Box 390K.

Knitting mill for sale. 17 cut, 30" Philip machine and complete finishing plant. Reasonable. Cash or terms. Box 390L.

Flat machine mechanic available. 15 years experience on Dubieds, Stolls, Universals, Queens, Tricomas. Good references. Willing to relocate. Box 390H.

Contract work wanted on jersey machines. Brushed goods, striping, bulkies. Box 391.

Looping Wanted. 7 point Sotco and 15 P machines. Quality workmanship guaranteed. Sanders Looping, Inc., 270 Irving Avenue, Brooklyn, N. Y., HYacinth 7-7924.

For Sale: Small knitting mill or individual machines — 7 gauge. Dubied VV, 40" double lock, high and low, flat power. Box 390N

REPRESENTATION WANTED

WANTED

KNIT FABRIC MILLS –

CIRCULAR AND RASCHEL

Well established, exclusive knit fabric selling agents with New York, California and Canadian offices, seek substantial mills equipped for large volume with country's best accounts, with multi-million dollar potential. Must be able to style strong quality lines.

Circular mill should have diversified Supreme, Tompkins, Wildman and ribbers.

Raschel mills—able to produce extra fine and coarse gauge fabrics.

We can offer assistance in styling and development, with a most unusual sales operation for thorough national coverage in men's, women's and children's shirts, sportswear and outerwear trades. Large immediate business available. Please state full information as to equipment and production. No contractors, please.

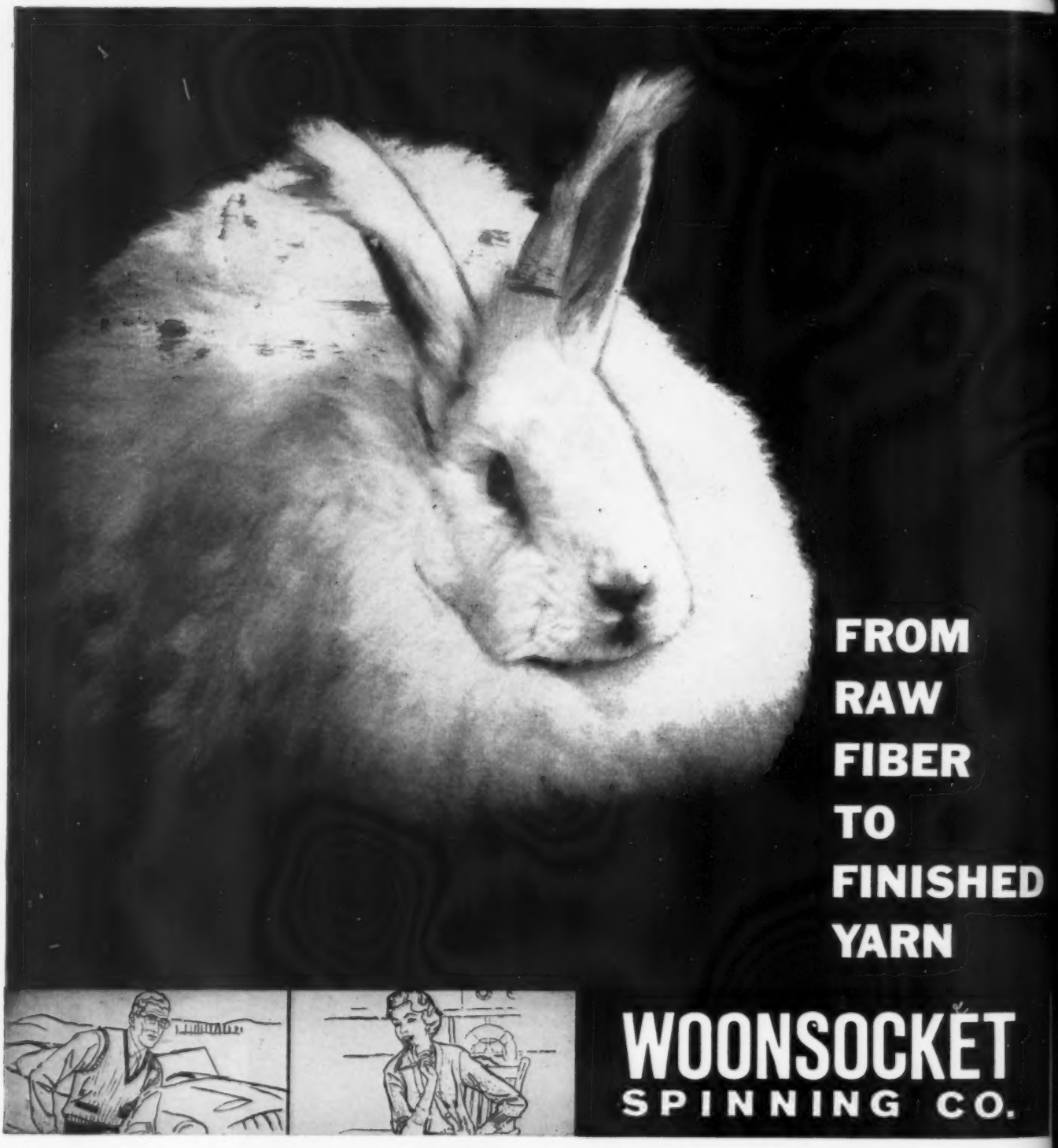
BOX 393

DIXIE® YARNS

Amour
writes the ticket
for carefree
travel in a
cosmopolitan
dress that journeys
far and wide
in non-wrinkle,
washable splendor
because it's
fashioned of
softly luxurious
Fair-Tex fabric
flat knit of
100% Orlon
acrylic fiber
spun by Dixie.

DIXIE MERCERIZING COMPANY
CHATTANOOGA, TENN.
NEW YORK • CHICAGO
LOS ANGELES • MEBANE
PROVIDENCE • READING
PHILADELPHIA

DURENE® MERCERIZED • DYED AND BLEACHED • COMBED PEELER SINGLE AND PLY
TURBO AND STAPLE CHEMICAL FIBERS • TUFTING YARNS



When you buy from Woonsocket you are buying the best! Whether it be cashmere, camels hair, angora, fur blends, mohair, lambs wool or other specialty yarn, Woonsocket begins with the world's finest fibers. Woonsocket processes them in its own mills, under highly scientific control until the yarn is delivered promptly to your factory. Thus you are assured of an adaptable resource, able to meet the constantly changing demands of men's and women's fashions.

Distributed by **AMICALE YARNS, INC.,** 511 Fifth Ave., New York 17, MUrray Hill 2-1655 • A. M. Krasnoff, 1 Belmont Ave., Bala Cynwyd, Pa., MOhawk 4-6345 • Edgar Worth, 1511 W. Florence Ave., Inglewood, Calif., ORegon 8-4293 • Textile Yarn Co., 222 W. Adams St., Chicago 6, Ill., DEarborn 2-5230 • Spun by **WOONSOCKET SPINNING CO.,** 115 Ricard St., Woonsocket, Rhode Island, POplar 9-3100